MINISTRY OF HEALTH KYRG MINISTRY OF EDUCATION AND SCIENCE
KYRGYZ REPUBLIC
MINISTRY OF HEALTH OF THE KYRGYZ REPUBLIC

INTERNATIONAL MEDICAL UNIVERSITY

«Agreed» by the Head of the Department «Internal medicine and family medicine»
Bokushov R.A
_____
«__»_____2022

«Approved» by Chairman of EMC Sin E.E.
_____
«__»_____2022

TRAINING AND METODOLOGY COMPLEX

by discipline: Professional Disease

The educational-methodical complex was compiled based on the State Educational Standard of Higher Professional Education of the Kyrgyz Republic in the specialty "General medicine" (5/6 years)
The department has developed an educational and methodological complex:

"Internal Medicine and Family Medicine."

Developed by: Nabil Ahmad

Bishkek 2021

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WORKING PROGRAMM
by discipline

In the discipline "Professional Disease"
For students in the specialty "GENERAL MEDICINE" (5/6 year)

Total credits	**1.5 (total 45)**
including:	
Lectures	**13 hours**
Practical	**19 hours**
independent work of the student	**14 hours**

Semester **7th semester**

The work program is compiled in accordance with the requirements of the State educational standard in the specialty

Work program developed: Nabil Ahmad

Reviewed and approved at the meeting of the Department of «Internal medicine and family medicine»
Protocol №_____ from "_____" _____2022y. _____

Head of the Department «Internal medicine and family medicine» **Bokushov R.A**
Approved by the educational and methodological commission of the faculty
Protocol №_____ from "_____" _____2022y.

Chairman of the EMC **Sin E.E.**

Bishkek 2021

The contents of the educational and methodical complex (table of contents).

Bishkek - 2022

CONTENT

1. Work program of discipline

Professional pathology, or the doctrine of occupational diseases, is a section of clinical medicine, the subject of which is diseases arising under the influence of adverse conditions of the working environment or labor process. Professional pathology is devoted to the study of the issues of clinic, pathogenesis, diagnosis, treatment and prevention of those diseases in the etiology of which, the influence of adverse factors of the working environment, plays a decisive role.

In the practical activities of the doctor, the establishment of the etiology of the disease is essential for timely, rational, pathogenetic justified treatment, as well as for the prevention of complications, targeted preventive measures to restore the patient's ability to work. Among the numerous etiological factors that cause the development of the disease, a significant role belongs to the unfavorable factors of the production environment, which cause the occurrence of so-called occupational diseases. Future doctors of any specialty need appropriate knowledge to provide medical care to workers of industrial enterprises, sanitary supervision, prevention, possible harmful effects of factors of the working environment on the human body. Therefore, teaching a course of occupational diseases in medical universities is essential. The program on occupational diseases reflects the current state of development of occupational pathology and takes into account the tasks of teaching the course in the amount necessary for a university graduate.

1.2. **Goals and objectives of the study of the discipline**

The goals and objectives of the study of the discipline are correlated with the general goals of the GOS HPE in the specialty "General Medicine".

The main purpose of teaching the subject of occupational diseases is the study by students of the main nosological forms of occupational diseases.

The task of teaching occupational diseases in medical universities is to give the basics of occupational diseases and teach students the methods of clinical diagnosis, medical tactics, emergency care for patients with occupational diseases necessary in working conditions in practical health care institutions. As a result of studying this subject, medical students form important professional skills - methods of recognizing occupational diseases. Students should gain knowledge about the etiology, pathogenesis, особенностях диагностики, принципов лечения и профилактики основных нозологических форм профессиональных болезней. У студентов вырабатываются умения обосновать рекомендации по экспертизе working capacity, medical and labor rehabilitation, as well as the organization and conduct of medical examination of workers of industrial enterprises and agricultural industries.

The main methods of teaching students are working with patients under the guidance of a teacher, lectures with clinical analysis and demonstration of patients. Students should see as many patients with occupational diseases as possible. Optional lectures can be read in separate sections, elective classes can be held.

The sequence of topics and the distribution of training time between individual topics can vary within 15%, depending on the relevance of the problems, regional pathology, the presence of a department of occupational pathology, technical means of training, visual aids.

2. **METHODICAL RECOMMENDATIONS FOR THE STUDY OF THE DISCIPLINE**

Many years of experience in teaching the subject of occupational diseases in all medical universities indicates that the most optimal is the study of this discipline in the 5th year of

medical university (10 semester). Since by this time students receive sufficient general theoretical training, they have studied the main clinical and hygienic disciplines, the knowledge of which is necessary to establish the diagnosis of occupational diseases, treat such patients, conduct lies. Chebno-labor expertise, development of rational preventive measures.

Teaching the course of occupational diseases should be carried out on the bases of specialized departments. The lecture course usually accounts for about a third of all training hours allocated to occupational diseases. The topics of lectures should precede the topics of practical exercises. When lecturing, a variety of visual aids and TCO (educational film and video films, slides, tape recordings, coda films, computer training programs) should be widely used.

When building a practical lesson, it is advisable to adhere to the following plan:

1. Motivation of the topic of practical training
2. Familiarization of students with the goals and plan of the lesson;
3. Control and correction of the initial level of knowledge;
4. Stage of independent work of students at the bedside (curation of thematic patients).
5. Clinical analysis of the thematic patient by the teacher, student - curator with the participation of the whole group of students. During the analysis, the quality of students' independent work and the formed skills and abilities are monitored. The teacher individually evaluates the fulfillment by each student of the goals of the practical lesson.

By the end of the cycle, students must submit self-compiled medical histories of the patients they supervise. In the epacrises of the medical history, the justification of occupational disease, treatment, prevention, labor expertise and rehabilitation measures is given. When compiling the content of lectures and practical exercises, it should be borne in mind that some forms of occupational diseases of the nervous system, the organ of hearing and upper respiratory tract, organ of vision and skin are considered at the relevant departments.

The program on occupational diseases provides for mandatory (extracurricular) work of students, the share of which is additionally allocated up to 30% of the total number of training hours allocated for classroom work. Knowledge control is carried out in the process of practical classes when interviewing students, with the help of test control, on the basis of an analysis of the clinical analysis of patients and in solving situational problems. At the end of the academic year, it is planned to conduct a test, which is carried out by means of a survey, solving situational problems and testing. Questions on occupational diseases are included in the state examination tickets, depending on the specialty of training.

RECOMMENDATIONS ON THE USE OF MATERIALS OF THE EDUCATIONAL AND METHODOLOGICAL COMPLEX

This educational and methodological complex is a methodological guide to the main types of educational activities of students: listening to lectures, working on the development and improvement of medical skills during practical classes, including curation of patients, interpretation of the results of laboratory and instrumental methods of examination of the patient, writing an educational history of the disease, solving situational problems, performing test tasks, etc.

In addition to the use of materials of educational and methodological complexes, special attention should be paid to the section "Annotation of the educational and methodological complex". The section shows in which area the fundamental training of students is provided, the goals and objectives of the discipline are specified.

The specificity of the study of the section "Work program" is manifested by the content of the thematic curriculum in it, the corresponding program and the State Standard of the discipline being studied. The section contains lists of occupational diseases that will be studied during classes. This section is compiled taking into account the specific knowledge and practical skills

that the student must master on each topic. Methods of clinical examination of patients with occupational diseases are considered, basic diagnostic methods.

RECOMMENDATIONS FOR THE STUDY OF INDIVIDUAL TOPICS OF THE DISCIPLINE

When studying the topic No. 1 "Subject of occupational pathology», to know that it studies the definition, the tasks of the subject. General issues of etiology, pathogenesis, clinic, diagnosis, prevention and examination of working capacity in occupational diseases. The main forms of work of the shop therapist (occupational pathologist) in the medical unit are highlighted and his role in the diagnosis of occupational diseases allows students. The documentation necessary to solve the problems is considered. a question about the connection of the disease with the work performed (occupational disease). The issues of medical and labor expertise and issues of labor rehabilitation for occupational diseases are outlined.

When studying the topic No. 2

"Diseases caused by exposure to industrial dust", attention should be paid to the objectives of the lesson: to diagnose various types of pneumoconiosis, to establish a diagnosis of the early stages of the disease and to conduct differential diagnosis with non-professional lung diseases that have a similar clinical picture. Questions relating to practical skills are outlined: to be able to independently conduct studies of the function of external respiration and give them an assessment, to describe radiographs of the lungs, to be able to assess the sanitary and hygienic situation of the patient's workplace to confirm its role in the development and features of the course of the disease, the presence of complications and concomitant diseases. Solve problemsпрофилактики, rehabilitation and VTE for working capacity and employment of patients with pneumoconiosis.

When studying topic No. 9, attention should be paid to diseases that are caused solely by the action of unfavorable production and occupational factors, as well as a number of such diseases in the development of which a causal relationship with the influence of a certain factor is established and the obvious influence of other, non-professional factors that cause similar changes in the body is excluded.

Work program

The program of the discipline is compiled in accordance with the State educational standards of higher professional education in the direction of "General Medicine".

Requirements for the level of mastery of the content of the discipline

The student should know:

1. Etiology, pathogenesis, clinical picture of the most common forms of occupational diseases
2. Features of diagnostics of occupational diseases

3. Differential diagnosis between occupational and non-professional diseases that have a similar clinical picture
4. Deontological norms, the ethics of the doctor in the process of curation of patients
5. Issues of treatment, prevention, examination of working capacity, medical and labor rehabilitation of occupational diseases.
6. Know the principles of organization and provision of emergency medical care for acute * occupational diseases (poisoning)•

The student must be able to:

1. analyze the data of the patient's professional history to determine the possible influence of production factors on the state of health
2. Be able to conduct preliminary upon admission to work and periodic medical examinations of workers
3. To analyze the mechanisms of action of adverse factors of the production environment that caused the development of occupational disease
4. Conduct a targeted examination of patients to identify clinical signs indicating the influence of adverse factors of the production environment
    1. Conduct differential diagnosis between suspected occupational and non-professional diseases that have a similar clinical picture
    1. Identify specific features of the course of this occupational disease
    2. Determine the degree and persistence of functional disorders of the affected organs and systems
    3. Correctly recommend the necessary therapeutic measures for patients with occupational diseases
    4. Provide emergency medical care for acute * occupational diseases (poisoning)•

On the basis of the clinical picture, the degree of functional disorders, working conditions, profession of the patient to solve questions about his ability to work and employment.

Syllabus

After the course, the student should be able to:

1. describe important chemical, physical and microbiological agents and their significance for the development of diseases in working life
2. analysis of work and workplaces from the point of view of occupational medicine in relation to the risk of diseases and disability in general, as well as for persons with specific vulnerabilities

1. plan appropriate professional medical and preventive actions and other risk reduction measures both in the individual workplace and at the organizational level and be able to critically analyze and evaluate the advantages and limitations of methods
2. describe the various requirements and recommendations contained in the legislation on the working environment, especially with regard to medical supervision, and be able to plan, document and report on relevant inspection programs taking into account quality assurance requirements.
3. describe the relevant results of professional medical research and critically evaluate them to work with evidence-based methods

Content

The main content of this course includes health risks resulting from exposure to chemical, physical and microbiological agents in working life. This can be divided according to the following:

1. occurrence (gases, vapors, particles, dust/smoke, vibration, noise, ionizing and non-ionizing radiation, indoor/outdoor climate, etc.)
2. short-term and long-term health risks (poisoning, cancer, lung disease, skin injuries/diseases, allergies/hypersensitivity, vibration or noise injuries, eye injuries/visual impairment, problems associated with working in a cold or hot environment, etc.).
3. preventive measures at the individual, work and organizational levels, including personal safety equipment
4. pregnant or breastfeeding workers and other workers with particular vulnerability

1. the focus will also be on legislative medical control in working life.

Teaching methods

Training consists of a combination of distance education and planned on-campus learning. Forms of study on campus include lectures, seminars, and group assignments. Distance education includes literature study, group assignments, writing reports, interview surveys, etc. On campus, there may be mandatory visits to certain study parts.

Exam

The exam takes place through an individual, written exam and a written assignment with an oral presentation at the seminars. The written assignment exam is assessed both in written content and in oral presentation. Scale of marks - Fail/Pass/Pass with honors. For those who passed the class, attending mandatory lectures is required. The course director evaluates whether he can compensate for the absence in this case. Before a student takes part in mandatory lectures or compensates for the absence in accordance with the instructions of the course director, the results of the student's course will not be reported to LADOK. Limit on the number of examination sessions A student has the right to participate in six examination sessions. If a student fails after four exam sessions, the student is strongly encouraged to visit a study counselor. Each time a student participates in the same test is counted as an exam session. Passing an empty exam counts as an exam session. An examination session for which a student has registered but has not participated will not be considered an examination session.

Transitional provisions

The exam will be held for a period of two years after the possible cancellation of the course. The examination may be carried out in accordance with an earlier list of references within one year after the date on which a significant update of the bibliography was made.

Other directives

The course will be evaluated in accordance with the guidelines established by the Council for Higher Education and on the basis of the evaluation procedures of the Master's Programmer (one year) in Labor and Health.

Literature and other teaching aids

Additional literature will be used in the form of, for example, scientific articles, rules and reports.

Glossary

Occupational disease - a chronic or acute disease of the worker associated with systematic and prolonged exposure to: - harmful production factor inherent in the profession; or- special working conditions characteristic of a particular production or profession.

Occupational diseases are: - non-specific, but characteristic clinical syndromes and forms of diseases, the occurrence and development of which is associated with the impact of only certain working conditions; or- diseases that occur when working with certain factors naturally more often than under other conditions.

Barotrauma of the lungs is an occupational disease of divers, in which there is a mechanical rupture of the lung tissue and the entry of a gas mixture into the ruptured capillaries.

Barotrauma of the lungs occurs with a sharp increase in pressure in the inhaled mixture or with a complete cessation of the supply of the gas mixture to the inhalation.

Disease - a violation of the normal functioning of the body, due to functional and / or morphological changes. The occurrence of the disease is associated with the impact on the body of harmful environmental factors.

Vibration disease is a disease that occurs with intense and prolonged exposure to vibration on a person, which causes irreversible pathological changes that capture the cardiovascular, nervous and endocrine systems.

Medical control is a system of medical monitoring of the health of certain groups of the population, in order to prevent and early detection of the disease.

Decompression diseases are painful conditions that occur in a person with a rapid change in environmental pressure. The intensity of decompression diseases depends on the individual characteristics of the body, the degree of pressure changes and the duration of stay at altitude or depth.

Radiation sickness is a disease that occurs when the body is exposed to ionizing radiation in doses exceeding the maximum permissible.

Radiation sickness is manifested by damage to the organs of hematopoiesis, nervous system, gastrointestinal tract, etc.

Seasickness is a painful condition of the body caused by rolling and accompanied by nausea and general weakness.

Professional hazards - factors of production that have an adverse effect on the state of health and performance of a person. There are occupational hazards caused by: - imperfection of production processes, technologies and equipment; - irrational organization of the labor process; - biological factors.

Noise disease is an occupational disease manifested in the form of hearing loss, hypertension (hypotension) and other disorders caused by prolonged exposure to high noise levels.

Alcoholism - a syndrome of physical dependence on alcohol, in which: - systematic use of alcohol causes alcohol intoxication, chronic intoxication; - sudden cessation of use can cause withdrawal symptoms: tremor, fear, hallucinations or delusions.

With alcoholism, a person's intellect decreases, his physical skills, memory and sanity deteriorate.

Usually, the treatment of alcoholism is carried out in a psychiatric hospital, where the patient's body is first cleansed of the harmful substances accumulated in it, and then the patient is helped to realize the psychological motives that brought him to such a state.

Anemia is a group of diseases characterized by a decrease in the number of red blood cells, the content of hemoglobin in them or the total mass of blood. Manifestations of anemia are general weakness, shortness of breath, etc.

Hemophilia is a hereditary disease that is expressed in a tendency to bleeding as a result of non-clotting of blood. It occurs in men, and is transmitted by women.

Infectious disease - a human disease, the occurrence and spread of which is due to: - the impact on a person of biological factors of the environment (pathogens of infectious diseases); and- the possibility of transmission of the disease from a sick person or animal to a healthy person.

Medicines - substances of natural origin or artificially created substances designed to cure diseases. Depending on the dosage form, there are: - liquid medicines: solutions, infusions, etc.; - soft medicines: ointments, liniments, etc.; - solid medicines: powders, tablets; - aerosol medicines.

Occupational disease - a chronic or acute disease of the worker associated with systematic and prolonged exposure to: - harmful production factor inherent in the profession; or- special working conditions characteristic of a particular production or profession.

Occupational diseases are: - non-specific, but characteristic clinical syndromes and forms of diseases, the occurrence and development of which is associated with the impact of only certain working conditions; or- diseases that occur when working with certain factors naturally more often than under other conditions.

3.2. **STRUCTURE AND LABOR INTENSITY OF DISCIPLINE**

Type of work, semester	Labor intensity in academic hours
№ Semester	7
Total hours	45 (1.5)
Lecture	13
Practical training	19
Independent work	14
Types of current control	Модульный контроль -2
Type of final control	Credit

3.3. **THEMATIC PLAN OF DISCIPLINE**

№	Name of sections and topics	Form of education			
		Full-time			
		Lecture	Practical training	Independent work	Total hours on the topic
Section 1. The subject of professional pathology.		4	4	2	6
	Topic 1.1. Introduction to the clinic of occupational diseases and its tasks	2	2		4
	Topic 1.2. Acquaintance with the clinic of occupational diseases, features of curation, examination of patients with occupational diseases. Curation of patients		2	2	4
	Topic 1.3. Familiarity with the medical care of workers. Preliminary and periodic medical examinations of workers. Issues of examination of working capacity and medical examination	2			2
Section 2. Dust diseases of the lungs		4	4	6	14
	Тема 2.1. Пневмокониозы.	2	2		4
	Topic 2.2. Pneumoconiosyot high-fibro genic dust. Silicosis. Silicotuberculosis.			2	2
	Topic 2.3. Pneumoconiosis from weakly fibro genic dust. Silicatosy. Anthracosis. Asbestosis. Pneumoconiosis of the electric welder.				
	Topic 2.4. Pneumoconiosis from toxic-allergenic dust. Berylliosis.			2	2
	Topic 2.5. Dust bronchitis			2	2
	Topic 2.6. Occupational bronchial asthma	2	2		4

Section 3. Occupational diseases from the effects of physical factors		2	2	2	6
	Topic 3.1. Vibration disease	2	2		4
	Topic 3.3. Occupational diseases of the musculoskeletal system			2	2
Section 4. Occupational diseases from the effects of toxic-chemical factors		9	9	2	20
	Topic 4.1. Intoxication with lead and its compounds	2	2		4
	Topic 4.2. Intoxication with lead and its compounds, mercury and its compounds, aromatic hydrocarbons				
	Topic 4.3. Intoxication with irritating substances.	2	2	2	6
	Topic 4.4. Occupational intoxication with pesticides	2	2		4
	Topic 4.5. Basic principles of diagnosis and emergency medical care for acute occupational intoxications	2	2		4
		1	1		2
TOTAL		13	19	14	45

CONTENTS

The subject of professional pathology. Definition. Tasks: General issues of etiology, pathogenesis, clinic, diagnosis, prevention and examination of working capacity in occupational diseases.
Preliminary and periodic medical examinations of workers of industrial enterprises and agricultural workers. Principles and organizational forms of labor protection and health promotion of the working population. Early detection of occupational diseases. Therapeutic and preventive work of the therapist in the medical and sanitary part of the industrial enterprise and the family doctor. Legislation on labor protection. The rights of patients, ethics and deontology of the doctor in occupational pathology.
Acquaintance with the clinic of occupational diseases and methods of examination of patients. Curation of patients with occupational diseases. Medical history of the patient in the clinic of occupational diseases. Documents necessary to resolve the issue of communication disease with the profession. Principles of diagnosis of occupational diseases. Prevention of occupational diseases. Examination of working capacity and rehabilitation of patients with occupational disease.

DISEASES CAUSED BY EXPOSURE TO INDUSTRIAL DUST.

Pneumoconiosis. Definition: Classification. TYPES OF INDUSTRIAL dust. Physical and chemical properties of dust and their hygienic value. Measures to combat dust and prevent diseases caused by it.
Pneumoconiosis from highly fibro genic dust silicosis, silicotuberculosis, anthracosilicotic, etc. Etiology. Pathogenesis. Clinic. X-ray diagnostics. Complications. Treatment. Prevention. Examination of working capacity.

Pneumoconiosis from weakly fibro genic dust (silicatoses), pneumoconiosis welder, siderosis, anthracosis, etc.). Etiology. Pathogenesis. Clinic. X-ray diagnostics. Complications. Treatment. Prophylaxis. Examination of working capacity.
Pneumoconiosis from toxic-allergenic dust (berylliosis, farmer's lung). Etiology. Pathogenesis. Clinic. Diagnostics. Treatment. Prevention. Examination of working capacity.
Chronic occupational bronchitis. Etiology. Pathogenesis. Diagnostic criteria. Clinic. Differential diagnostics. Complications. Treatment. Prevention. Examination of working capacity.
Professional bronchial asthma.
Etiology. Pathogenesis. Diagnostics. Differential diagnosis with diseases of non-professional etiology. Clinic. Treatment. Prevention. Examination of working capacity.

DISEASES CAUSED BY THE INFLUENCE OF PHYSICAL FACTORS OF THE PRODUCTION ENVIRONMENT.

Vibration disease. Etiology. Types of vibration. Physical characteristics classification of industrial vibrations. Pathogenesis. Main clinical syndromes. Vibration disease from the action of general vibration. Vibration disease from the action of local vibration. Vibration disease from the action of combined vibration. Functional diagnostic methods. Differential diagnosis. Treatment. Prevention. Examination of working capacity.

Diseases of the musculoskeletal system (periarthritis of the shoulder joint, epicondylitis of the shoulder, radial joints, elbow styloiditis, aseptic necrosis of the head of the radius, ligament diseases, osteochondrosis of the spine), Etiology. Pathogenesis. Clinical manifestations. Diagnostics. Differential diagnosis. Treatment. Prevention. Examination of working capacity

DISEASES CAUSED BY THE INFLUENCE OF TOXIC-CHEMICAL FACTORS OF THE PRODUCTION ENVIRONMENT.

Intoxication with lead and its inorganic compounds. Etiology. Pathogenesis. Clinical manifestations. Diagnostics. Dan fecal diagnostics. Treatment. Principles of excretory therapy. Prevention. Examination of working capacity.

Mercury intoxication. Etiology. Pathogenesis. Diagnostics. Clinic of acute and chronic poisoning. Treatment. Principles of emergency care. Prevention. Examination of working capacity.

And toxication with aromatic hydrocarbons (benzene and its homologues). Etiology. Pathogenesis. Diagnostics. Differential diagnosis. Clinic of acute and chronic poisoning. Treatment. Principles of emergency care. Complications. Prevention. Examination of working capacity.

Intoxication with amine and nitro compounds of benzene and their homologues. Etiology. Pathogenesis. Diagnostics. Differential diagnostics. Clinic of acute and chronic poisoning.

Treatment. Principles of emergency care. Complications. Prophylaxis. Examination of working capacity.
Intoxication with hydrocyanic acid and cyanide. Etiology. Pathogenesis. Diagnostics. Differential diagnosis. Clinic of acute and chronic poisoning. Treatment. Principles of emergency care. Antidote therapy. Prevention. Examination of working capacity.
Intoxication with pesticides used in agriculture. Etiology. Pathogenesis. Diagnostics. Differential diagnosis. Clinic of acute and chronic poisoning. Treatment. Principles of emergency care. Antidote therapy. Prevention. Examination of working capacity.
Intoxication with irritating substances (compounds of chlorine, sulfur, nitrogen, etc.). Etiology. Pathogenesis. Diagnostics. Differential diagnosis. Clinic of acute and chronic poisoning. Treatment. Principles of emergency care. Prophylaxis. Examination of working capacity.

Recommendations for teachers.

Recommendations on the use of materials of the educational and methodological complex.

1. When working with this educational and methodological complex, special attention should be paid to the main types of educational activities of the student: curation of patients (including children and adolescents with various types of occupational pathology), compiling an educational history of the disease, studying drugs, solving situational problems, performing test tasks, and so on.
2. The main methods of teaching students are to work with patients under the guidance of a teacher. Students should see perhaps more patients with occupational diseases.
1. During the course of occupational pathology, students draw up one medical history for the supervised patient. For work with patients, the student receives the "Scheme of academic medical history".
1. Occupational diseases, which are extremely rare in clinical practice, are studied on the principle of independent extracurricular work (educational medical histories, literature, clinical tasks) with the inclusion of a number of important issues of this topic in the section of differential diagnosis in the most frequent occupational diseases.
2. It is recommended to widely use material and technical means - X-rays, slides, ECG, FVD, blood tests: general, for the content of carboxyhemoglobin and methemoglobin, porphyrin metabolism, clinical biochemistry and immunology, drug kits, photographs of patients, capillaroscopy, devices for assessing peripheral sensitivity, clinical situational tasks.
1. Practical classes should be held in specialized departments of the National Hospital of the Moscow Hospital of the Kyrgyz Republic, which are the base of the Department of Therapeutic Disciplines No. 1. At least 25% of the training time should be devoted to classes in the clinic.

1. When performing the main types of educational activities of the student: curation of patients and compilation of an educational history of the disease, it is recommended to use the 1st part of the textbook. It gives a scheme of clinical history of the disease, noted the features of the collection of anamnesis and physical examination of patients with occupational diseases.
2. For extracurricular and independent preparation of students for practical classes, it is recommended to use additional literature.

Recommendations for the study of individual topics of the discipline:

SECTION 1.

The subject of professional pathology.

Topic 1.1. Acquaintance with the clinic of occupational diseases, features of curation, examination of patients with occupational diseases.

To know that in the conditions of industrial production and agriculture there are harmful factors that, under certain conditions, cause the development of occupational diseases.
Starting the examination of the patient, it is necessary to find out what harmful production factors could have or have an impact on the state of his health in the process of work. It is necessary to carefully study the documents with which the patient is sent for examination.
In the direction indicate the purpose of hospitalization, information about the incidence and appeal of the worker for medical care, the results of preliminary and periodic medical examinations, survey data in other hospitals, the treatment and its effectiveness, etc.
Sanitary and hygienic characteristics of working conditions should contain information about harmful production factors and their intensity effects on the worker's body, measurement data on the content of toxic substances, dust, vibration parameters, noise, etc.

When examining a patient with an occupational disease, great attention should be paid to targeted questioning. The patient is given the opportunity to tell in detail about the sanitary and hygienic working conditions in the past and at the present time, about the conditions of everyday life, about the development of the disease.

At the same time, of course, it is necessary to comply with all the requirements of medical deontology, remember the high sense of responsibility to a sick person, the need for an attentive and caring attitude to him, the preservation of medical secrecy and compliance with medical ethics.

Topic 1.2. Familiarity with the medical care of workers. Preliminary and periodic medical examinations of workers. Issues of examination of working capacity and medical examination

Be able to solve the issues of identifying persons subject to mandatory preliminary upon admission to work and periodic medical examinations exposed to harmful and unfavorable working conditions.
For the correct organization and conduct of preliminary and periodic medical examinations, it is necessary to study the content of the order of the Ussr MoH No. 555 of 29.09.89. Pay attention to the list of contraindications for employment in harmful working conditions, the amount of examination necessary for the early detection of an occupational disease.
Carefully study the instructions for organizing and conducting preliminary and periodic medical examinations.
Review the list of persons subject to periodic medical examinations, indicate the specialists who should participate in the examination, and list the additional research methods necessary to detect early signs of a particular occupational disease. According to the medical documentation of the medical institution, each student analyzes the quality of the preliminary and periodic medical examinations.
To do this, you need to pay special attention to:
1) compliance with the terms of inspections;
2) use of necessary diagnostic methods;
3) purposefulness of examination by specialists and the quality of their records in the medical record; 4) compliance with continuity in the maintenance of documentation,

5) assessment of the dynamics of the disease;
6) availability of individual conclusions with recommendations in the shown cases of carrying out medical-prophylactic and rehabilitation measures.
When conducting an examination of the ability to work of patients with occupational diseases, it is necessary to pay attention to:

1. features related to the diagnosis of occupational diseases,
   - the need to take into account the options for the course of the disease,
1. targeted examination of the patient using specific functional and laboratory research methods, etc.;
2. features of the legal order, the need to take into account the current list of occupational diseases (Appendix 6 to the order of the MH kr of September 29, 1989, No. 555).

At the same time, it is necessary to know the social and material benefits to which citizens of the country with occupational diseases are entitled (payment of a temporary disability certificate in the amount of average earnings, submission of a sick leave, the right to an increased pension in case of permanent disability, payment of compensation in case of disability).

Section 2. Dust diseases of the lungs

Topic 2.1. Pneumoconiosis from high-fibro genic dust. Silicosis. Silicotuberculosis.

Be able to diagnose various types of pneumoconiosis, establish a diagnosis of the early stages of the disease and conduct differential diagnosis with non-professional lung diseases that have a similar clinical picture. Interpret the results of the study of the function of external respiration and give them an assessment, be able to describe radiographs of the lungs; Be able to assess the sanitary and hygienic situation of the patient's workplace to confirm its role in the development and features of the course of pneumoconiosis;
To know what factors of the production environment and features of the organism determine the rate of development and progression of silicosis, the main theories of the pathogenesis of silicosis. Pay attention to the main radiological signs of silicosis. It is necessary to know the most frequent complications of silicosis.
Be able to select a rational, pathogenetically based therapy, taking into account the course of the disease, the presence of complications and concomitant diseases. Solve the issues of prevention, rehabilitation and VTE for working capacity and employment of patients with silicosis.

Topic 2.2. Dust bronchitis

When interviewing and analyzing the sanitary and hygienic characteristics of working conditions, specify the place of the surveyed operations in the general technological process.

Highlight the operations associated with the greatest dust formation and determine how much of the working time they occupy. Assess the intensity of dust exposure by comparing the measurement data in the working area with the MPC. Pay special attention to the chemical composition of dust, which determines not only the rate of development and severity of the symptoms of bronchitis, but also the features of its clinical course.
Based on the presented characteristics of working conditions and results Survey give an assessment of the operation of the ventilation system, whether respirators or other personal protective equipment are used. Estimate the total "dust" experience. If possible, exclude the role of infection and smoking in the development of dust bronchitis.

Topic 2.3. Occupational bronchial asthma

When studying this topic, pay attention to the fact that the clinical picture of professional bronchial asthma does not differ from non-professional bronchial asthma. Therefore, its differential diagnosis requires a deep analysis of the patient's working conditions, the time of onset of the disease, the appearance of asthmatic attacks directly at the workplace, as well as the use of provocative tests using substances for these purposes with which the patient can come into contact in the process of his work.
Know the criteria for determining the ability to work and employment of patients with occupational bronchial asthma.

SECTION 3. DISEASES CAUSED BY THE INFLUENCE OF PHYSICAL FACTORS OF THE PRODUCTION ENVIRONMENT.

Topic 3.1. Vibration disease

Know productions in which vibration is a factor of occupational hazards. When studying working conditions, find out what type of vibration the worker has contact with. Analyzing the working conditions, highlight the main parameters of vibration, guided by the fact that in relation to the danger of developing vibration disease, vibration with a frequency of 16-250 Hz is of the greatest importance.
In establishing the diagnosis of vibration disease, the results of functional studies (pall esthesiometry, algesiometry, thermometry, cold test) are of great importance, the purpose of which is to identify the state of peripheral (central) blood circulation, the sensitive sphere, as well as to conduct an X-ray examination of the musculoskeletal system.
Given the variety of clinical manifestations of vibration disease, the non-specificity of individual syndromes, conduct a differential diagnosis of the disease with Raynaud's disease, syringomyelia, autonomic polyneuritis, cervico-thoracic radiculitis, myositis, plexitis.
To establish a final diagnosis and its justification, analyze all the results of the clinical examination, comparing them with sanitary and hygienic working conditions.
Having established the diagnosis, it is necessary to differentially approach the appointment of treatment depending on the form of the disease, the characteristics of the clinical course, its severity.

Consider that for all stages of vibration disease, treatment will be successful only if the effects of vibration and other factors contributing to the development of the disease are eliminated. Issues of VTE and professional suitability are solved depending on the severity of the disease and the qualifications of the patient.

Topic 3.2. Occupational diseases of the musculoskeletal system

When studying the topic, study the working conditions of the patient, which can be the cause of occupational diseases of the musculoskeletal system. When interviewing the patient and according to available medical documents, find out the degree of static and dynamic voltage when performing work operations (furniture upholsterers, shinshiki, etc.), the frequency of repeated stereotypical movements with the preservation of a forced posture (milkmaids, parquet floors, computer operators), the possibility of constant cooling (workers of meat processing plants, cold storage centers, fishermen), as well as the complex effect of various factors, for example, micro traumatization of fingertips and contact with solvents, physical stress exposure to vibration, static overvoltage and rapid stereotypical movements. Specify how much of the patient's working time is busy performing the same operation, which hand is leading in the performance of labor techniques. Rational therapy to be able to select taking into account the form of the disease of the musculoskeletal system of professional genesis and to solve questions about the ability to work, employment and rehabilitation of such patients. The expert decision should be strictly individual, its content depends on the severity of the pathological process, the effectiveness of the therapy used, age, education and qualifications of the patient.

Section 4. Occupational diseases from the effects of toxic-chemical factors

Topic 4.1. Intoxication with lead and its compounds.

Be able to diagnose intoxications caused by exposure to lead, its inorganic compounds and thermal power plants, as well as to conduct differential diagnosis with non-professional diseases that have an anal logic clinical picture (porphyrin disease, "ostryy belly", etc.);
Be able to evaluate and conduct differential diagnosis of acute and chronic intoxication with benzene and its homologues with non-professional diseases that have a similar clinical picture.
Be able to diagnose mercury intoxication and conduct differential diagnosis with non-professional diseases, nervous and endocrine systems that have similarities with the symptoms of mercury intoxication.
Be able to assess the sanitary and hygienic environment of the patient's workplace to confirm its role in the time of intoxication;

Be able to select rational, pathogenetically based therapy, taking into account the stage, course of the disease, the presence of complications;

Be able to solve the issues of rehabilitation, prevention, employability and employment of the patient.

Theme 4.3. Intoxication with irritating substances.

Be able to diagnose acute and chronic intoxications caused by exposure to substances with irritating effects; establish a clinical version of intoxication; conduct differential diagnosis with non-professional forms of diseases of the respiratory system;

Be able to decipher the radiograph of the lungs for the oral of the clinical form of the disease; independently conduct studies of the function of external respiration and draw up a conclusion on the results obtained; be able to assess the sanitary and hygienic situation of the workplace to confirm its role in the development of inflow;
Be able to choose a rational, pathogenetically justified therapy, taking into account the stage, course of the disease, the presence of complications; solve the issues of rehabilitation, prevention, labor ability and employment of the patient.

Topic 4.4. Occupational intoxication with pesticides

Pay attention to the main labor processes, in which agricultural workers can be exposed to pesticides. Know the main ways of entering the body of pesticides.
Be able to diagnose acute and chronic intoxication with organophosphorus, organ oil and chlorproguanil pesticides; be able to use data on sanitary and hygienic working conditions to confirm the diagnosis of toxic chemicals;
Be able to select a rational, pathogenetically based therapy for intoxication with pesticides, taking into account the nosological form of intoxication, stage, course of the disease and the presence of complications;
Be able to solve the issues of rehabilitation, prevention, ability to work and employment of patients; be able to substantiate and formulate a clinical diagnosis, determine the relationship of the lesion with specific etiologic factors;

Topic 4.5. Basic principles of diagnosis and emergency medical care for acute occupational intoxications

It is necessary to know the causes of acute intoxication in the conditions of production, the main ways of penetration of the produced poisons into the body and the classification of acute occupational from ravleniya. It is necessary to be able to diagnose the most common forms of acute occupational intoxications and diseases requiring emergency medical care; with the time to prescribe and independently conduct pathogenetically justified, rational emergency medical care and further treatment of post-giving;
To assess the circumstances that caused acute occupational intoxications and diseases in emergency situations, extraordinary work, non-compliance with the rules of technology without danger to confirm the diagnosis, provide pathogenic emergency medical care and further treatment of the victim;
To be able to solve the issues of prevention, rehabilitation and VTE for working capacity and employment of patients who have suffered acute intoxication and disease, taking into account the remaining accurate phenomena after the acute period of the disease and having had complications.
Know the principles of antidote therapy of acute intoxications.

SECTION 5. EDUCATIONAL-METHODICAL AND MATERIAL AND TECHNICAL SUPPORT OF DISCIPLINE

5.1. LIST OF RECOMMENDED LITERATURE

MAIN LITERATURE

Occupational diseases. Textbook for students of medical institutes. / Artamonova V.G., Shatalov N.N. - M., Medicine, 1993.}
A guide to practical classes on occupational diseases.
N.N. Shatalov. V.G. Artamonova, M. Medicine. 1998.
Occupational diseases. Guide for doctors edited by N.F. Izmerov - M. Medicine., 1996.
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FURTHER READING

Occupational dust diseases of the lungs. Karapata P.P. Kiev, 1986.
Emergency care for occupational intoxications.
Artamonova V.G., Shatalov N.N., Leningrad. 1981.
Clinic, diagnostics, treatment, issues of examination of working capacity
and prevention of lead intoxication: Guidelines
edited by A.M. Monaenkova. M.-1986.
Complexions in the clinic of occupational diseases. M.Meditsina, 1995.
Toxic-dust bronchitis. Sterekhova N.P. Sverdlovsk, 1999.
Poisons and antidotes. Oxengendler G.I. L. Nauka, 1982. .
Vibration disease. Methodical. river. Pod red A.M. Monaenkova A.M. Moskva, 1998.
Handbook of Occupational Pathology. Edited by L. Gratsiyanskaya and V. Kovshilo. L., 1981
Periodicals: journals "Occupational Medicine and Industrial Ecology», Clinical Medicine",
"Therapeutic Archive", etc.

5.2. **LIST OF NORMATIVE AND LEGAL DOCUMENTS**

Law of the Kyrgyz Republic on labor protection. Bishkek, 2003.

Thematic plan of independent work of students (CPC)

SUBJECT	FORM OF CONTROL	Часы
Methods of clinical examination and diagnosis of occupational diseases	Oral or written testing	1
The influence of new factors of the working environment on the health of workers	Abstract	2
Differential diagnosis of berylliosis	Report	2
Diseases caused by noise exposure	Abstract	2

Diagnosis of intoxication with various pesticides	Solving situational problems	2
Antidote therapy of acute occupational poisoning	Testing	1
Clinical and diagnostic criteria for manganese intoxication	Analysis of educational histories of diseases with a report and discussion in a group	2

Methodical recommendations for students on independent work

Topic No1: Methods of clinical examination and diagnosis of occupational diseases
1. Independent work with patients
2. Establishment of a preliminary diagnosis and its oral justification
3. Drawing up a plan for the examination of the patient
4. Study of the clinical history of the supervised patient and evaluation of additional research methods

Topic No2: The impact of new factors of the working environment on the health of workers
Stages of self-preparation
Elaboration of educational and scientific material
Search and review of scientific publications and electronic sources of information, preparation of a review opinion

Topic No3: Intoxication of amino-and-nitro compounds of aromatic series and their homologues

Questions for self-preparation
1. List the industries and professions in which the aromatic series of amino-and-nitro compounds and their homologues are unfavorable production factors.
2. What do you know about the pathogenetic mechanisms of intoxication?
3. What qualitative and quantitative changes in peripheral blood are characteristic of intoxication?
4. What neurological syndromes are observed in the clinical picture of intoxication?
5. How are the issues of examination of working capacity for this disease resolved?

Topic #4: Noise-related illnesses

Stages of self-preparation
Elaboration of educational and scientific material
Search and review of scientific publications and electronic sources of information, preparation of a review opinion
Working with tests and self-test questions
Problem solving

Topic No5: Diagnosis of intoxication with various pesticides

Stages of self-preparation

Elaboration of educational and scientific material
Search and review of scientific publications and electronic sources of information, preparation of a review opinion
Working with tests and self-test questions
Problem solving

SECTION 6. DICTIONARY OF TERMS AND PERSONALITIES (GLOSSARY)

Industrial dust is an aero disperse system (aerosol) in which the dispersion medium is air and the dispersed phase is solid dust particles.
Maximum permissible concentrations (MPC) of dust - hygienic assessment of the dust factor contained in the air of the working area and does not cause the development of pathological changes in the body of workers.
Sanitary and hygienic characteristics of working conditions - a document that describes specific adverse factors of the working environment, their parameters, the duration of contact working with them. The document is drawn up by the sanitary doctor of the SES, which carries out state supervision of the facility where the sick person works.
Preliminary and periodic medical examinations are one of the forms of medical examination of workers of industrial enterprises and agriculture aimed at protecting the health of workers, early diagnosis and prevention of occupational and general diseases.
Professional history is a sequential listing in chronological order of the main professions of the subject, throughout his work activity.
Emergency notification is a document where a case of an acute occupational disease is registered.
Medical - labor examination - an expert decision on the degree of disability of the patient.
Pneumoconiosis is an occupational lung disease that develops only under conditions of exposure to working industrial dust.
Occupational hazards are factors of the working environment that can have an adverse effect on the body of the worker and lead to the disease of the latter.
Occupational disease is a disease caused by exposure to harmful working conditions on the worker.
Silicosis is a dusty lung disease associated with inhalation of aggressive dust of silicon dioxide (quartz), which causes the development of nodular fibrosis.
Silicates are pneumoconiosis that arise from inhalation of silicate dust, i.e. minerals containing silicon dioxide in a bound state.
Carboconioses are pneumoconiosis arising from inhalation of carbon-containing dust (coal, graphite, soot, coke).
Metalloconioses are pneumoconiosis arising from inhalation of X-ray contrast dust with a moderate fibrous reaction.
Byssinosis is an occupational lung disease in persons exposed to dust of organic fibrous materials (cotton, flax, hemp, jute, kenaf) for a long time.
Industrial poison is a harmful chemical substance to which a person can be exposed in the conditions of production activity.
Lead is a soft, gray metal. In nature, it occurs mainly in the form of the mineral "lead shine" (sulfurous lead).
Lead gelt (lead oxide) – yellowish or reddish crystals.
Lead rug (lead Orth plumbate) – red crystalline powder
Tetraethyl lead (TPP) is an organic compound of lead, a colorless oily liquid with a heavy sweetish smell.

Antidotes (antidotes) are drugs used in the treatment of poisoning, the mechanism of action of which is based on the neutralization of the poison or the prevention and elimination of the toxic effect caused by it.
Vibration is the mechanical vibrations of elastic bodies.
Vibration disease is a complex of pathological changes observed in persons systematically exposed to vibration.
Pesticides are chemicals used to control pests of crops (insecticides, zoocides), plant diseases (fungicides), to destroy weeds (herbicides), to control ticks and blood-sucking insects (acaricides).
Cyanides are inorganic. Hydrogen cyanide (hydrocyanic acid, formic acid nitrile) is a colorless, easily mobile, very volatile liquid.
Cyanides are organic. Nitriles (cyanide alkyls, hydrocyanic acid esters) are liquids that enter the body through the respiratory system, are easily absorbed through the skin and mucous membranes.
Professional aseptic necrosis (osteonecrosis) - develop as a result of systematic overload and micro traumatization of the articular heads of long tubular bones, as well as some spongy bones.
Sick leave for occupational disease – "benefit for temporary disability due to labor injury or occupational disease for workers and employees of state, cooperative and public enterprises, institutions and organizations, including non-members of the trade union, are issued in the amount of 100 percent of earnings regardless of continuous work experience»
Professional bronchial asthma - occurs under the influence of a certain industrial allergen with experience from several weeks to several years, mostly from 2.5 to 4 years.

SECTION 7. CONTROL AND MEASURING MATERIALS OF ATTESTATION TESTS

7.1. Criteria for assessing knowledge

When assessing the knowledge of students in endocrinology, it is recommended to adhere to the competence approach. the skills that the student has developed after completing the study of the discipline should be evaluated. Therefore, the main criteria for assessing the knowledge of students are:

1. Ability to use the most important methods of examination of endocrinological patients and evaluate the results of special research methods;
2. Ability to diagnose, treat, organize the prevention of typical forms of endocrine diseases.

7.2. List of attestation tests and used control and measuring materials

1. Current knowledge control.

In the process of studying the discipline, students perform intermediate control tasks. The results of these tasks, as well as a survey and interview on the topics of the studied sections are the basis for grading the current control.
Types of control tasks:
1. Curation of thematic patients with a subsequent report at a practical lesson and a joint discussion under the guidance of a teacher on the three stages of diagnostic search.
2. Solution of clinical situational problems.

1. Control works on the topics of discipline (modular control in large sections of the discipline).

TESTS FOR MODULE 1

2 4
1. Mechanisms of pathogenesis of professional autoimmune bronchial asthma
    Atopic mechanism
    Autoimmune reactions
    Immune complex mechanism
    Direct activation of irritnite receptors
    Non-immune mechanisms
    Complement-dependent reactions

1 2 4 5
2. Clinical signs of asbestosis:
    Chronic bronchitis
    Emphysema of the lungs
    Exudative pleurisy
    Diffuse pneumofibrosis
    Thickening of the pleura
    Alveolar proteinosis

3
3. What disease develops from grain dust:
    Silicate
    Berylliosis
    "Easy farmer"
    «Light pigeon breeder»
    «Easy winegrower»

3 4 5 6
4. What type of dust leads to the development of hypersensitive pneumonyst:
    Quartz-containing
    Radiopaque
    Welding aerosol
    Polymetallic
    Plant
    Animal feed

2 4 6 7
5. Silicotuberculosis is characterized by:
    Acute beginning
    Absence of acute onset
    Outcome in recovery
    No outcome in recovery
    Mandatory bacillus excretion
    Rarity of bacillus excretion
    Rare hemoptyptyrhage

1

6. Course of asbestosis:

Progressive
Regressive
Outcome in recovery
Go to inactive form
Alternation of exacerbations and remissions

2

7. Large-node pneumoconiosis is characterized by darkening:

Up to diameter5 см
Up to diameter10 см
More in diameter10 см
More in diameter10 мм
Up to width10 мм

1 2 3 4

8. Mechanisms of pathogenesis of professional bronchial asthma of mixed genesis (from industrial and bacterial allergens):

1. Immediate hypersensitivity reaction
2. Autoimmune mechanisms
3. Delayed hypersensitivity reactions
4. Immunocomplex mechanism
5. Inhibition of cyclooxygenase

1 2

9. The etiological factors of occupational bronchial asthma do not include:

1. Asbestos dust
2. Iron-containing dust
1. Quartz-containing dust
2. Plant dust
3. Chromium compounds
4. Diisocyanatos
5. Mushrooms

4

10. Erasmus syndrome is a combination of silicosis and ....:

1. Dermatomyositis
2. SLE
3. Rheumatoid arthritis
4. Scleroderma
5. Goodpasture syndrome
6. Pulmonary alveolar proteinosis

3

11. Complications of silicosis include all of the following, except ...:

1. Chronic obstructive pulmonary disease
2. Spontaneous pneumothorax
3. Pleural mesothelioma
4. Pulmonary bleeding

5. Mid-lobe syndrome
6. Lung cancer
7. Pulmonary tuberculosis

1 3 5

12. With an uncomplicated form of silicosis, the following indicators of FVD change:

1. Maximum ventilation of the lungs is reduced
2. Residual volume increases
3. Gel decreases
4. Increased bronchial resistance
5. Reduced maximum entry and output speed
6. Reduced blood oxygen saturation

3 5

13. Clinical forms of silicosis:

1. Alopecia
2. Infiltrative
3. Lymphangitic
4. Pleural
5. One-sided, asymmetrical
6. Fibro-cavernous

1 3

14. X-ray changes in pneumoconiosis of electric welder and gas cutter are characterized by:

1. Nodular shadows "r"
2. Nodal formations "A"
3. Linear-mesh deformation of the pulmonary pattern of type«S»,«t»
4. Linear-heavy and spotted shadows of type «t», «u»
5. Merging blackening «ax»

2 3 5

15. In what forms of pneumoconiosis should be prescribed corticosteroids:

1. Silicosis, Ip
2. Berylliosis
3. Kaplan syndrome
4. Welder's pneumoconiosis
5. Erasmus syndrome
6. Silicosis 2t

1 2 4

16. Mechanisms of pathogenesis of dust bronchitis:

1. Dyskinesia of the bronchial tree
2. Violation of the function of the muscular apparatus
3. Increased generation of reactive oxygen species
4. Violation of the system of local immunity
5. Death of alveolar macrophages

3 7

17. Designate with an X-ray code multiple nodules gaming from 3 to in diameter, the pulmonary broncho-vascular pattern is not differentiated:10 мм

1. 3 p
2. 2 g
3. 3 r
4. Ag
5. es
6. aIm
7. ax

4

18. With silicotuberculosis, the most common form of tuberculosis:

1. Disseminated
2. Infiltrative
3. Fibro-cavernous
4. Alopecia
5. Silicotuberculous broncho adenitis

2 5

19. Significant violations of the diffuse ability of the alveolar-capillary membrane and early hypoxemia are not typical for:

1. Asbestosis
2. Silicosis
3. Berylliosis
4. Exogenous allergic alveolitis
5. Pneumoconiosis of electric welders
6. Chronic hypersensitive pneumonitis

1 3 5

20. Morphological forms of asbestosis:

Diffuse
Granulomatous
Micro-eye
Interstitial-granulomatous
Fibrosing alveolitis

1 5

21. Interstitial form of silicosis is radiologically characterized by:

1. Irregularly shaped by linear dimming with a width of 1.5-3 мм
2. Rough spotted irregularly shaped blackouts from 3 to width10 мм
3. Rounded dimming from 1.5 to diameter3 мм
4. Small rounded blackouts up to 1,5 мм
5. Thin linear blackening's of irregular shape up to width1,5 мм

4 5

22. Mechanisms of pathogenesis of professional bronchial asthma of atopic form:

1. Microbial inflammation
2. Complement-dependent reactions
3. Immunocomplex type of hypersensitivity
4. Regain type of hypersensitivity
5. Auto allergic component

4

23. Workers, which profession are exposed to the general vibration?

1. Handouts
2. Polishers
3. Tunnelers
4. Locksmiths' assemblers
5. Bulldozers

2

24. What syndrome characterizes the initial manifestations of vibration disease?

1. Myasthenic
2. Angio dystonic
3. Diencephalic
4. Polyneuritis
5. Vegetomyophascitis

4

25. Method of determination of vibration sensitivity:

1. Capillaroscopy
2. Dynamometry
3. Cold test
4. Pall esthesiometry
5. Electromyography

1

26. Differential diagnosis of vibration disease and syringomyelia is based on the detection of:

1. Peripheral vascular disorders
2. Gross trophic disorders
3. Arthropathies
4. Loss of tendon reflexes
5. Dissociated sensitivity disorders

2

27. The term "periarthritis of the shoulder joint" includes all diseases, except:

1. Deltoid bursitis
2. Shoulder epicondylitis
3. Calculous bursitis
4. Subharmonic bursitis
5. Arthrosis of the beak-clavicle joint

1

28. Periarthritis of the shoulder joint is characterized by difficulty:

1. Putting your hand behind your back
2. Moving the hand forward
3. Hand movements backwards
4. Pronation of the forearm
5. Forearm supinations

2

29. X-ray picture of shoulder epicondylitis:

1. Bone growths along the edge of the articular surfaces
2. Paraossal calcification in the suprages
3. Destruction of the humerus tubercle
1. Significant thickening of soft tissues
2. Aseptic necrosis of the humerus

5

30. For the diagnosis of bursitis, all of the above is important, except:

Gradual start
Unilateral joint damage
Clear localization of the process
Absence of damage to the joint itself
Joint and bone injuries

1

31. Stolidity of the radius is characterized by everything except:

1. Disorders of the function of the wrist joint
2. Limitations of 1-finger function
3. No arm injury
4. Finkelstein's symptom
5. Symptom of Elkin.

TESTS FOR MODULE 2

2 6 7

1. Workers, which professions are in contact with lead:

1. excavators
2. accumulators
3. furriers
4. tunnelers
5. Pavers
6. solderers solder POS 40, 60
7. non-ferrous metal smelters

1 3 4

2. Lead is used in the following industries:

1. Batteries
2. Plastics
3. typographic
4. Crystal
5. Rubber
6. Solvents
7. measuring instruments
8. pulp and paper

7 9

3. List the industries where mercury is used:

1. Batteries

2. Plastics
3. typographic
4. Crystal
5. Rubber
6. Solvents
7. measuring instruments
8. Explosives
9. pulp and paper

1 3

4. List the production where antimony is used:

1. Batteries
2. Plastics
3. typographic
4. Crystal
5. Rubber
6. Solvents
7. measuring instruments
8. Explosives

5. List the industries where benzene and its homologues are used:

1. Batteries
2. Plastics
3. typographic
4. Crystal
5. Rubber
6. Solvents
7. measuring instruments
8. Explosives
9. fluorescent lamps

3 4

6. Symptom's characteristic of poisoning with irritating gases:

1. somnolence
2. hearing loss
3. photophobia
4. spasm of the cleft
5. indomitable vomiting

1 2 3

7. For the "blue" type of hypoxemia with toxic pulmonary edema is characterized by:

1. cyanosis of mucous membranes and skin
2. sharp shortness of breath
3. hypercapnia
4. hypocapnia
5. increase in oxygen in venous blood

2 3 4

8. For the "gray" type of hypoxemia with toxic pulmonary edema is characterized by:

1. hypercapnia
2. hypocapnia

3. decrease in oxygen content in arterial blood
4. pale gray color of the skin
5. bright red color of mucous membranes

3 4 5

9. List the clinical manifestations of acute intoxication with amine and nitro compounds of benzene:

1. Leukemia
2. bladder tumors
3. acute renal failure
4. hemolytic anemia
5. hypoxemia
6. cataract
7. bronchospasm
8. dermatitis

1 2 5

10. Diagnosis of acute poisoning with amine and nitro compounds of benzene is based on:
    1. data of the trade union route
    2. determination of methemoglobin in the blood
    3. determination of ALA in the urine
    4. determination of carboxyhemoglobin in the blood
    5. definition of Heinz-Ehrlich bodies in earth

4 5 6

11. List the clinical manifestations of acute mercury intoxication:

1. bronchospasm
2. myosis
3. hemolytic anemia
4. hemorrhagic syndrome
5. acute renal failure
6. pronounced astheno vegetative syndrome
7. extrapyramidal hyperkinesis

1 2 5

12. What symptoms are important for the diagnosis of chronic mercury intoxication?

1. sleep and emotional disturbance
2. gingivitis
3. violation of porphyrin metabolism
4. Infants
5. erethism
6. photodermatitis

3 6

13. With mercury intoxication, antidotes are used:
    1. methylene blue
    2. cuprenil
    3. unithiol
    4. aloxime
    5. sodium despheralthiosulfate

1 6

14. Antidotes for the treatment of antimony intoxication:

1. unithiol
2. methylene blue
3. amyl nitrite
4. atropine
5. dipyroxime
6. sodium thiosulfate

3 6 7

15. In the treatment of intoxication with hydrocyanic acid, antidotes are used:

1. sodium thiosulfate
2. supernal
3. methylene blue
4. all oxime
5. unithiol
6. glucose
7. amyl nitrite
8. dipyroxime

1

16. To remove a sharp excitation in acute poisoning, the following is prescribed:

1. amanozines
2. Glucose
3. sodium thiosulfate
4. calcium
5. carbogen

4 8

17. Antidotes for poisoning with organophosphorus I/x:

1. sodium thiosulfate
2. supernal
3. methylene blue
4. all oxime
5. unithiol
6. glucose
7. amyl nitrite
8. dipyroxime

2 4

18. What therapeutic measures are contraindicated in toxic pulmonary edema?

1. oxygen therapy
2. therapeutic bronchoscopy
3. dehydration
4. chest massage
5. anti-inflammatory agents

4 5

19. What therapeutic measures should be carried out with the "gray" form of toxic pulmonary edema?

1. oxygen therapy

2. bloodletting
3. carbogen inhalation
4. glucose intravenously
5. camphor

QUESTIONS TO MODULE No1

1. The main types of work and duties of the shop doctor.
2. On the basis of what documents are mandatory preliminary upon admission to work antiperiodic medical examinations of workers exposed to harmful and unfavorable working conditions? Summary of the annexes to this document.
3. What diseases belong to occupational, and what are the occupational injuries?
4. Documentation needed to address the issue of the relationship of the disease to the work performed (professional disease). Who should make it?
1. Importance of sanitary and hygienic characteristics working conditions to establish the diagnosis of occupational disease.
2. Features of the examination of the patient to identify his occupational disease.
3. Which medical and preventive institutions are given the right to primary diagnosis of chronic and severe occupational diseases (intoxications)?
4. The purpose of preliminary (upon admission to work) and periodic medical examinations.
1. What policy documents (name and maintenance) should be used in organizing and conducting preventive medical examinations of workers exposed to harmful facts of the working environment?
2. What criteria should be used to assess the quality of preventive medical examinations?
3. List individual medical and preventive and rehabilitation measures prescribed for or suspected of a professional disease.
4. Name the collective therapeutic and preventive sanitary and hygienic measures that need to be carried out based on the results of preventive motor.
5. The concept of working capacity and types of its violation.
6. The main tasks of VTE in the clinic of occupational diseases.
7. Benefits for persons with occupational diseases and intoxication.
8. The concept of a recourse claims in professional diseases.
9. The concept of temporary disability and the desire to establish it.
10. The concept of a sick leave, indications for its issuance and the maximum period of continuation.
11. The main functions of VTEK.
1. The concept of a disability group and the criteria for their division.
2. Terms of re-examination of disabled persons I, II and III. In their cases, a group of disabilities is established without specifying the period of re-examination?
3. What cases of re-examination of persons with disabilities are carried out in a shorter time?
4. Measures for social, labor and medical rehabilitation of patients with occupational diseases.
5. What circumstances should be taken into account for the rational employment of patients with occupational diseases?
6. The importance of concomitant non-professional diseases in determining disability groups in persons with occupational diseases.
7. In which areas of production are workers exposed to dust factors?
8. What properties of dust particles determine their fibrous effect? Which types of dust have the greatest fibro genic activity?

9. What factors of the production environment and characteristics of the organism determine the rate of development and progression of silicosis?
10. The main theories of the pathogenesis of silicosis.
11. Describe the morphological structure of the silicosis nodule.
12. What complaints and objective data are characteristic of uncomplicated silicosis?

1. The main radiological signs of silicosis.
2. List the main indicators of the function of external respiration and the nature of their changes in silicosis.
3. List the most frequent complications of silicosis and give their characteristics (based on clinical, gemological, laboratory data).
4. What variants of the course of silicosis are known to you?
5. On what principles is the classification of pneumoconiosis in force in this country built?

1. With what occupational diseases differential diagnosis of silicosis?
2. What are the basic principles of treating silicosis? Why the irreversibility of the far-reaching morphological melena cannot justify the refusal of treatment?
3. Name the medical and physiotherapeutic methods of treating silicosis and its complications.
4. The main criteria for determining the ability to work of patients with silicosis.
5. What is the difference between the clinical picture of silicates and silicosis?
6. What is the difference between the clinical picture of cartoonists and silicosis?
7. What is the difference between the clinical picture of metal Lomonosov and silicosis?
8. What are the features of the clinical picture of pneumococci noises caused by exposure to organic dust?

1. What clinical forms of occupational slaughter can be observed when exposed to electric welding aerosol?

2. In which industries and professions are workers exposed to dust factors?
3. What properties of industrial dust determine its ability to cause chronic dust bronchitis?
4. List the complaints that are common to patients with chronic dust bronchitis. Are there any complaints specific to dust bronchitis?
5. What objective symptoms are detected with chronic dust bronchitis? Are there any special ones among them?
6. Provide data from the main instrumental methods of the study used to diagnose dust bronchitis.
7. List the criteria for the etiological diagnosis of chronic dust bronchitis (justify the connection of the disease with exposure to industrial dust).

1. List the principles of treatment of patients with chronic dust bronchitis.
2. What are the rules of VTE in chronic dust armor hit?
3. What are the directions of technical, sanitary-hygienic and medical prevention of dust bronchitis?
4. How do you envision the role of an occupational health doctor in linking chronic bronchitis with occupation and in developing and implementing preventive measures?
5. What adverse production factors can cause the development of occupational bronchial asthma? Give examples of substances that have sensed analgesic, irritating and combined effects.
6. What is the clinical picture of bronchial asthma of moderate and severe degree?
7. List the main indicators of the function of external respiration and describe the nature of their changes in bronchial asthma.
8. The totality of what data gives the basis for the diagnosis of bronchial asthma of professional origin?
9. What is the difference between the prognosis for occupational bronchial asthma in each case?

1. What are the basic principles of treatment of bronchial asthma?

2. The main production and technological processes in which berylliosis may occur.

3. Which beryllium compounds are most toxic?

1. Pathogenesis of berylliosis. Ways of penetration of beryllium and its compounds into the body and ways of excretion. The effect of beryllium sudaria in the air of working premises on the course and severity of clinical manifestations of the disease.
2. What beryllium compounds cause acute intoxication? List the clinical syndromes of acute beryllium intoxication.
3. Chronic berylliosis: the main clinical syndromes, extrapulmonary lesions, features of narcissi on of gas exchange.
4. X-ray picture of lung lesions in stages I, II and III of chronic berylliosis.
5. The main therapeutic and preventive measures for berylliosis.
6. VTE issues.

QUESTIONS TO MODULE No2

1. List the productions in which vibration is a factor of occupational hazards.
2. What are the main occupational groups of workers who may be exposed
3. What are the basic vibration parameters? What is their importance in the development of the disease?
4. What factors contribute to the development of vibration disease?
5. Outline the classification of vibration disease.
6. What are the main clinical syndromes in vibratory disease in those working with manual mechanized tools?
7. Give a description of the clinical syndromes of vibe a rational disease that develops from exposure to general vibration.
8. What are the features of the clinical manifestations of the early stages of vibration disease?
9. Describe functional methods for diagnosing vibration disease.
10. Outline the differential diagnosis of vibration disease.
11. What are the main methods of treatment and features of the labor examination in vibrating disease?
12. List the main measures of medical and hygienic prevention of vibration disease.
13. What is the role of the hygienist in establishing the connection of the disease with the profession and carrying out activities aimed at preventing the development of vibration and restoring the ability to work?
14. Describe the conditions that may be the basis of occupational diseases of the musculoskeletal system. List the approximate professions in which they may arise.
1. What are the causes of vegetative polyneuropathy of a professional nature?
2. Conduct a differential diagnosis of the profession of oral autonomic polyneuropathy.
3. Describe the clinical picture of scapulohumeral periarthritis, methods of treatment and medical and labor expertise.
4. What is the diagnostic value of X-ray examinations in this disease?
1. Tell us about the pathogenesis of epicondylitis, conduct a differential diagnosis with arthritis and arthrosis of the elbow joint.
2. Describe the symptoms of Dow born, Thomsen, Welsch, El Kin, Finkelstein. For what diseases are they characteristic?
3. Tell us about the clinical symptoms of professional myositis, methods of their diagnosis. How are the issues of working capacity resolved?
4. Describe the clinical picture of DeGuerin's disease.

5. What is the clinic and treatment methods for the «snapping" finger?
6. Name the main production and occupational groups of workers who may be exposed to adverse effects of lead compounds.
7. List the ways in which lead enters the body.
8. What are the main pathogenetic mechanisms of lead intoxication?
9. Outline the current classification of chronic lead intoxication.
1. List the main clinical symptoms and syndrome of lead intoxication caused by inorganic and organic lead compounds.
2. Give criteria for differential diagnosis of lead intoxication.
3. Describe the main methods of treatment and the specificity of VTE in chronic lead intoxication.
4. What is the role of a hygienist and occupational pathologist in the development of the connection of the disease with the working conditions of the sick and the implementation of preventive measures aimed at preventing lead intoxication, as well as restoring the patient's ability to work?
5. List the industries and professions in which aromatic hydrocarbons are unfavorable production factors.
6. Describe the routes of intake, metabolism and ways of extracting benzene and its homologues from the body.
1. What organs and systems do aromatic hydrocarbons act on? What do you know about pathogenetic furs of intoxication?
2. Describe the clinical picture of acute intoxication.
3. What qualitative and quantitative changes in the pe rifer blood are characteristic of intoxication with aromatic hydrocarbons?
4. What neurological syndromes are observed in the clinic intoxication with aromatic hydrocarbons?
5. What therapeutic and preventive measures are carried out in chronic intoxication with benzene and its homologies?
6. How are the issues of examination of working capacity for this disease resolved?
7. Name the production facilities where contact with mercury and its inorganic compounds is possible,
8. What additional adverse occupational factors can contribute to the development of mercury intoxication?
9. Ways of mercury intake into the body and their role in the time of intoxication.
10. In which bodies is mercury deposited?
1. The main ways of mercury excretion from the body.
1. What is meant by "carrying" mercury and can it be considered a disease?
2. Name the cardinal symptoms of micro mercurialize and classical mercury intoxication.
3. What is the current classification of chronic mercury intoxication?
4. What organs and systems are affected by chronic mercury intoxication? List the main clinical syndromes of the disease.
5. Name the main methods of functional and laboratory diagnostics, allowing to judge the severity of chronic mercury intoxication.
1. Name the methods of treatment of mercury intoxications.
2. What is the scheme of administration of unithiol in acute and chronic mercury intoxications?
3. What are the most effective methods of preventing mercurialize?
4. List the medical contraindications that prevent employment in contact with mercury. What is democratization?
5. List the main toxic substances of irritant action and determine the role of their physical properties in the development of respiratory lesions.
6. Present your ideas about the pathogenesis of respiratory diseases of toxic-chemical etiology.
7. Name the main clinical forms of respiratory lesions of toxic-chemical etiology.

8. Describe the clinical picture of poisoning with chlorine and its compounds.
9. What is the clinical picture of intoxication with sulfur dioxide?
10. Describe the clinical picture of poisoning with sulfur from the genus.
11. What is the clinical picture of poisoning with oxides and zeta?
12. Name the principles of emergency care for acute toxic lesions of the respiratory system.

1. Describe the complex of therapeutic measures for chronic diseases of the respiratory system of toxicological etiology.
2. How is the examination of working capacity carried out in case of respiratory organs of toxic-chemical etiology?
3. Prevention of 'respiratory lesions is irritating to you.
4. List the main labor processes in which agricultural workers may be exposed to pesticides.
5. Name the pesticides that are most common in modern agriculture and cite them as a classify.
6. What are the main ways of entering the body of pesticides?
7. What is the pathogenesis of chronic intoxications with toxicants of various chemical structures?

1. Describe the clinical picture of intoxication with chlorine and organ silver pesticides.
2. What is the clinical picture of phosphoric intoxication with genic pesticides?
3. Conduct a differential diagnosis between octroy and chronic intoxication with pesticides.
4. Name the main methods of laboratory and functional diagnosis of chronic intoxications with toxicants.

1. What are the principles of antidote therapy of intoxications with pesticides different chemical structure?
2. Outline your ideas about the main princes of the smell of VTE in professional intoxications of the toxic chemical Tomi. List methods of prevention of intoxication with pesticides in agriculture
3. What are the causes of acute intoxication in the production environment?
4. List the main ways of penetration of producing poisons into the body.
5. Give a classification of acute professional foramen.
6. List the basic principles of diagnosis of acute occupational poisoning.

1. Describe the clinical symptoms of acute carbon monoxide inflows.
2. Describe the clinical symptoms of acute occupational intoxication with aromatic carbohydrate childbirth.
3. Describe the clinical signs of acute occupational intoxication with pesticides.
4. Name the special clinical and laboratory research methods used in the diagnosis of the most common acute occupational intoxication.
5. Tell us about the basic principles of providing emergency medical care and treatment of acute professional intoxications.
6. What is the role of the occupational health doctor in establishing the diagnosis and implementing measures aimed at preventing acute occupational poisoning and maintaining the health of workers?