

GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №1 Hygiene as a science, its role in maintaining the health of the population.

OBJECTIVE: to introduce the methodology of preventive sanitary outreach;
examine instructional materials on "Basic rules of communication and persuasion in preventive work with the population";
master psychological techniques of health education;
complete preparations for the conduct of preventive sanitary outreach.

EQUIPMENT: methodical grant, the basic regulations.

Required theoretical knowledge

1. Objective, subject and tasks of General Hygiene.
2. Sanitary science, its goals and objectives, the relationship with hygiene.
3. History of the Hygiene development. The role of the most prominent figures of science and hygienic sanitary affairs in the development of Hygiene.
4. Structure of sanitary-epidemic services in Belarus.
5. Types of health surveillance and control.

Practical work of students

1. Analyze how sanitary epidemiological welfare of the population is provided.
2. Discuss the rights and duties of citizens in ensuring sanitary and epidemiological welfare.

Questions for self-study

1. Methods for diagnostics of the population health status.
2. Unfavorable, severe and catastrophic effects on health, diagnostic criteria.
3. Diagnostics of the link between environmental factors and health outcomes.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.
3. Preventive and social medicine / K. Park. – Jabalpur, 2003. – 552 p.

GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №2 Modern methodological basics of hygiene as a scientific and practical discipline

OBJECTIVE: to introduce the methodology of preventive sanitary outreach;
 examine instructional materials on "Basic rules of communication and persuasion in preventive work with the population";
 master psychological techniques of health education;
 complete preparations for the conduct of preventive sanitary outreach.

EQUIPMENT: methodical grant, the basic regulations.

Required theoretical knowledge

1. Complex Hygienic diagnostics. Research methods used in the hygienic diagnostics.
2. Hygienic prenosological diagnostics, its value in identifying premorbid states and the primary prevention of disease.
3. Hygienic methods of prenosological diagnostics.
4. Medical prevention. Types of prevention.
5. Meaning of hygienic measures in the system of primary, secondary and tertiary prevention. The purpose and objectives of primary prevention.

Practical work of students

1. Learn the basic rules of communication and persuasion in preventive work with the population.

Questions for self-study

1. "Health effects" of hazardous working conditions - "healthy workers effect."
2. Elements of hygienic diagnostics in medical practice.
3. Diseases caused by poor housing environment, sick building syndrome.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №3 Effects of risk factors on the organism. Basics of hygienic standardization

OBJECTIVE: to **introduce** the scientific principles of hygienic standardization of environmental factors;
examine the classification of risk factors;
learn the effects of risk factors on the organism; criteria of relationships between environmental factors and health outcomes;
perform the task of the peculiarities of multifactorial effects on the human body.

EQUIPMENT: tables and methodological grant, the Law "On the sanitary-epidemiological welfare of the population."

Required theoretical knowledge

1. Risk factors. Classification and value of individual risk factors in shaping the structure of primary, general, professional morbidity and mortality.
2. Criteria of relationships between environmental factors and health outcomes.
3. Scientific bases of hygienic standardization, principles of hygienic standards.
4. The concept of the maximum permissible concentration (MPC) of chemicals, the maximum permissible levels (MPL) of physical factors impact, the occupational exposure limits, indicative permissible levels.
5. Adaptation to the effects of environmental factors. True adaptation and compensation.
6. Socio-hygienic monitoring. Information monitoring subsystem. Features of multifactorial effects on the human body.

Practical work of students

1. Get acquainted with the arrangements for hygienic standardization:
 - 1.1. Master the concept of public hygienic standardization;
 - 1.2. Licensing activities and certification of products, works and services, representing a potential danger to human health;
 - 1.3. State Hygienic registration and regulation.
2. Explore feature of hygienic standardization in multivariate effects on the human body (the principle of comprehensive hygienic regulation).
3. Explore a methodology for identifying risk factors in accordance with international recommendations.
4. Master the algorithm of adaptive systems of the body assessment to identify premorbid states in hygienic prenosological diagnostics.
5. Conduct a survey on healthy lifestyle in order to identify students with behavioral risk factors and analyze the results.

Questions for self-study

1. Ecological-hygienic monitoring of environmental factors.
2. Basic regulations of WHO on non-communicable diseases, the Integrated Noncommunicable Diseases Intervention (CINDI) program.
3. Basic models of noncommunicable diseases (environmental, accumulation, developmental and genetic model).
4. Organization of a healthy lifestyle (HLS) for a particular patient.
5. Holding a conversation on the prevention of major non-communicable diseases.
6. Master algorithm of physician assistance for smoking patients.
7. Risk Factors and lifespan.

GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №4 The basics of food hygiene. The Laws of Rational nutrition

OBJECTIVE: to familiarize with food hygiene problems; with features of hygienic standardization of different population groups needs in energy; legislative justification of hygienic measures in the sphere of nutrition;
explore hygienic principles and features of the rational, clinical and preventive nutrition;
learn the methodology for assessing the adequacy of food-menu layout;
perform the task to study the chemical composition and caloric content of the daily diet of the student.

EQUIPMENT: tables and methodological grant, tables of chemical content of principle foods, Recommended daily allowances in nutrients and energy.

Required theoretical knowledge

1. Definition and content of food hygiene as a scientific and practical preventive medicine section.
2. Hygienic characteristics of macro- and micronutrients, their importance in human nutrition.
3. Hygienic characteristics of rational nutrition, its place in the system of primary, secondary and tertiary prevention.
4. The Laws of Rational nutrition.
5. Hygienic principles of a diet. Hygienic importance of a diet.

Practical work of students

1. Determine the energy requirements of students.
2. Calculate calorie and chemical composition of the daily diet of the student and develop recommendations for its correction.

Questions for self-study

1. Features of children and adolescents nutrition.
2. Features of nutrition for pregnant and lactating women.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №5 Hygienic measures to ensure quality and safety of nutrition

OBJECTIVE: to familiarize with food hygiene problems; with features of hygienic standardization of different population groups needs in energy; legislative justification of hygienic measures in the sphere of nutrition;
explore hygienic principles and features of the rational, clinical and preventive nutrition;
learn the methodology for assessing the adequacy of food-menu layout;
perform the task to study the chemical composition and caloric content of the daily diet of the student.

EQUIPMENT: tables and methodological grant, tables of chemical content of principle foods, Recommended daily allowances in nutrients and energy.

Required theoretical knowledge

1. Hygienic characteristics of clinical and preventive nutrition, their place in the system of primary, secondary and tertiary prevention.
2. Physiological and hygienic norms of nutrition.
3. Features of different population groups (manual workers and students, athletes, the elderly) nutrition.
4. Preventive nutrition and its role in the prophylaxis of occupational diseases.
5. Rations of preventive nutrition and indications for their use.

Practical work of students

1. Examine Norms of physiological needs for nutrients and energy for different population groups.
2. Solve situational tasks.

Questions for self-study

3. Rational nutrition of the population living in areas with elevated levels of radiation exposure.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №6 Hygienic examination of the food quality. Hygienic requirements and evaluation methods of basic foodstuffs of animal origin

OBJECTIVE: **familiarize** with the chemical composition, nutritional and biological value of principle foodstuffs;
explore the documentation of food examination;
master examination procedure of food quality;
perform the task of the peculiarities of multifactorial effects on the human body.

EQUIPMENT: methodological grant, situational tasks, basic hygienic standards.

Required theoretical knowledge

1. Types of state hygienic examination of quality and safety of food raw materials, products and ready meals.
2. The order of the state hygienic examination.
3. Classification of food raw materials, products, and food by quality and safety.
4. Hygienic characteristics of nutritional and biological value, examination of the animal origin products (milk, meat, poultry, fish, eggs) quality.

Practical work of students

1. Examine quality assessment methods of some food products of animal origin.
2. Perform assessment of the quality of cow's milk, meat.
3. Make a conclusion about products quality.
4. Solve situational tasks.

Questions for self-study

1. The value of milk in clinical and preventive nutrition.
2. The value of meat in clinical and preventive nutrition.
3. The value of fish in clinical and preventive nutrition.
4. The value of eggs in clinical and preventive nutrition.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №7 Hygienic examination of the food quality. Hygienic requirements and evaluation methods of basic foodstuffs of plant origin

OBJECTIVE: **familiarize** with the chemical composition, nutritional and biological value of principle foodstuffs;
explore the documentation of food examination;
master examination procedure of food quality;
perform the task of the peculiarities of multifactorial effects on the human body.

EQUIPMENT: methodological grant, situational tasks, basic hygienic standards.

Required theoretical knowledge

1. Hygienic characteristics of nutritional and biological value, examination of the plant origin products (cereals, flour, bread, vegetables, fruits and berries) quality.
2. Control of hazardous chemical compounds and biological objects in food.

Practical work of students

1. Examine quality assessment methods of some food products of plant origin.
2. Perform assessment of the quality of flour and bread.
3. Make a conclusion about products quality.
4. Solve situational tasks.

Questions for self-study

1. Nutritional value of sugar and confectionery.
2. Nutritional value of vegetables and melons.
3. Nutritional value of fruits and berries.
4. Nutritional value of mushrooms.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №8 Prevention of diseases associated with the violation of norms and rules of nutrition

OBJECTIVE: **familiarize** with the sanitary diagnosis of nutritional status;
study the symptoms and prevention of diseases associated with the violation of norms and rules of nutrition;
master the methodology to identify the symptoms of nutritional diseases; methodology for assessing vitamin status of an organism;
complete prevention of diseases associated with the violation of norms and rules of nutrition.

EQUIPMENT: methodical grant, situational tasks.

Required theoretical knowledge

1. Definition and classification of nutritional status. Hygienic diagnosis of nutritional status.
2. Symptoms and diseases of malnutrition. Identification of nutrient deficiency early symptoms. Diseases of protein-energy malnutrition.
3. Symptoms of malnutrition according to WHO recommendations.
4. The main causes of vitamin and mineral deficiency.
5. Symptoms and diseases of excessive nutritional status.
6. Hygienic measures in the system of primary, secondary and tertiary prevention of nutrition-related diseases.

Practical work of students

1. Master the technique of early symptoms of nutrient deficiency detection in accordance with WHO recommendations.
2. Make a plan of preventive hygienic measures in the system of primary, secondary and tertiary prevention of excessive nutrition (excessive nutritional status).
3. Learn the detection method of the ascorbic acid content in raw and cooked vegetables.
4. Solve situational tasks.

Questions for self-study

1. Diseases, the occurrence of which may be related to food:
 - 1.1. Worm infestation - geohelminthiasis and biohelminthiasis.
 - 1.2. Intestinal infections (dysentery, salmonellosis, typhoid fever, cholera).
 - 1.3. Viral infections (polio, hepatitis A, rotavirus).
 - 1.4. Zoonoses - animal infectious diseases (tuberculosis, anthrax, brucellosis, foot and mouth disease).

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instruction) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English Language). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

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LESSON №9 Bacterial food poisoning and its prevention

OBJECTIVE: **familiarize** with modern classification and clinical manifestations of bacterial food poisoning;
study the stages of food poisoning investigation, the role of medical diagnostic and sanitary-epidemiological services in the investigation of food poisoning, prevention activities of food poisoning;
master the methodology of food poisoning investigation, technique of biological material collection for subsequent laboratory analysis;
perform control work to resolve situational tasks on the diagnosis, prevention and investigation of food poisoning.

EQUIPMENT: methodical grant, situational tasks.

Required theoretical knowledge

1. Definition and classification of food poisoning.
2. Food poisoning of bacterial nature (infection type and toxic type).
3. Prevention of bacterial food poisoning.
4. Investigation of food poisoning. Stages of the investigation, the goals and objectives of each of the stages.
5. The role of medical diagnostic and sanitary-epidemiological services in organizing and conducting the investigation.

Practical work of students

1. Master the methodology of food poisoning investigation on the basis of instructions on investigation, accounting and laboratory studies.
2. Solve situational tasks.

Questions for self-study

1. State sanitary supervision at catering.
2. State sanitary supervision in the trade of food.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №10 Nonbacterial food poisoning and its prevention

OBJECTIVE: **familiarize** with modern classification and clinical manifestations of nonbacterial food poisoning;
study the stages of food poisoning investigation, the role of medical diagnostic and sanitary-epidemiological services in the investigation of food poisoning, prevention activities of food poisoning;
master the methodology of food poisoning investigation, technique of biological material collection for subsequent laboratory analysis;
perform control work to resolve situational tasks on the diagnosis, prevention and investigation of food poisoning.

EQUIPMENT: methodical grant, situational tasks.

Required theoretical knowledge

- 1 Definition and classification of food poisoning.
- 2 Nonbacterial food poisoning (poisonous plants and animal tissues, products of plant and animal origin, toxic under certain conditions; poisonous chemicals).
- 3 Prevention of nonbacterial food poisoning.
- 4 Investigation of food poisoning. Stages of the investigation, the goals and objectives of each of the stages.
- 5 The role of medical diagnostic and sanitary-epidemiological services in organizing and conducting the investigation.

Practical work of students

1. Fill emergency notification of infectious disease, food, acute professional poisoning.
2. Master the methodology of food poisoning investigation on the basis of instructions on investigation, accounting and laboratory studies.
3. Solve situational tasks.

Questions for self-study

1. Purpose and objectives of preventive public health surveillance on catering and food trade.
2. The purpose and objectives of the current sanitary supervision on catering and food trade

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №11 Hygienic requirements for catering in healthcare institutions

OBJECTIVE: **familiarize** with basic hygienic requirements for nutrition provision units and catering in hospitals;
study standard diets of the clinical nutrition;
master the technique of sanitary surveys of a hospital nutrition provision unit;
perform a sanitary survey of the hospital nutrition unit, resolve situational tasks on the description of standard diets.

EQUIPMENT: methodical grant, situational tasks.

Required theoretical knowledge

1. Hygienic requirements to the catering in a healthcare organizations.
2. Hygienic requirements for the structure, equipment and design of a nutrition unit.
3. Documentation of a hospital nutrition unit.
4. Standards of an average daily food basket in healthcare organizations.
5. Hygienic control of patients catering, quantitative and qualitative adequacy of a diets.
6. Hygienic principles of clinical nutrition. Characteristics of a standard clinical diets.

Practical work of students

1. Master the algorithm of the hospital nutrition unit examination.
2. Get acquainted with the documentation of a nutrition unit and conduct sanitary survey of nutrition unit and buffet in the hospital.
3. Examine standard clinical diets.
4. Draw the sanitary inspection act.
5. Solve situational tasks.

Questions for self-study

1. Catering of patients in health institutions.
2. Medical monitoring of a nutrition unit personnel's health.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №12 Hygienic requirements for catering enterprises. Nutritional hygiene credit test.

Questions for Nutritional Hygiene Test

1. Objective, subject and tasks of General Hygiene. Sanitary science, its goals and objectives, the relationship with hygiene. Structure of Hygiene.
2. Sanitary-epidemic wellbeing of the population. Structure of sanitary-epidemic services in Belarus.
3. Types of sanitary supervision and sanitary control.
4. Risk Factors. Identification and management of risk. Hygienic monitoring of environmental factors.
5. Complex Hygienic diagnostics. Research methods used in the hygienic diagnostics.
6. Hygienic prenosological diagnostics. Hygienic methods of prenosological diagnostics.
7. Medical prevention. Types of prevention. Hygienic measures in the system of primary, secondary and tertiary prevention. The purpose and objectives of primary prevention.
8. Scientific bases of hygienic standardization, principles of hygienic standards.
9. The concept of the state hygienic standardization, hygienic registration, licensing activities, certification of products and services that pose a potential health hazard, state sanitary-hygienic examination.
10. The concept of the maximum permissible concentration (MPC), the maximum permissible levels (MPL) of exposure, indicative safe levels of exposure (ISLE), indicative permissible levels (IPL). Hygienic evaluation of multifactorial influences.
11. Adaptation to the effects of environmental factors. True adaptation and compensation.
12. General hygienic problems of nutrition.
13. Hygienic characteristics of macronutrients, their importance in human nutrition.
14. Hygienic characteristics of micronutrients, their importance in human nutrition.
15. Types of nutrition. Hygienic characteristics of different types of nutrition.
16. Hygienic principles of a balanced diet.
17. Physiological and hygienic standards in nutrition. Special features in organization of children's nutrition.
18. Features of nutrition organization for adult working population.
19. Special features of nutrition for intellectual work employees and students, sportsmen, the elderly people.
20. Types of state hygienic examination of quality and safety of food raw materials, products and ready meals.
21. The order of the state hygienic food examination. Control of hazardous chemicals and biological compounds in food.
22. Classification of food raw materials, products and meals according to the quality and safety.
23. Milk: hygienic characteristics of nutritional and biological value, examination of a quality.
24. Meat and poultry: hygienic characteristics of nutritional and biological value, examination of a quality.
25. Fish and eggs: hygienic characteristics of nutritional and biological value, examination of a quality.

26. Cereals and wheat: hygienic characteristics of nutritional and biological value, examination of a quality.
27. Fruits and vegetables: hygienic characteristics of nutritional and biological value, examination of a quality.
28. Definition and classification of nutritional status. Hygienic diagnosis of nutritional status.
29. Alimentary diseases. Symptoms and diseases of malnutrition. Identification of nutrient deficiency symptoms.
30. Diseases of protein-energy malnutrition. Prevention of protein-energy malnutrition.
31. Vitamin deficiency: reasons, types, clinical manifestations, prevention.
32. Mineral deficiency: reasons, types, clinical manifestations, prevention.
33. Symptoms and diseases of excessive nutritional status. Prevention of obesity.
34. Definition and classification of food poisoning.
35. Characteristics of infection type bacterial food poisoning. Prevention measures.
36. Characteristics of toxic type bacterial food poisoning. Prevention measures.
37. Characteristics of non bacterial food poisoning. Prevention measures.
38. Investigation of food poisoning. Stages of the investigation, the goals and objectives of each of the stages.
39. The role of medical diagnostic and sanitary-epidemiological services in organizing and conducting the investigation of food poisoning.
40. Hygienic requirements to the catering in healthcare organizations.
41. Hygienic requirements for the structure, equipment and design of a nutrition unit.
42. Sanitary requirements for the transportation, reception and storage of food. Documentation of a hospital nutrition unit.
43. Hygienic control of patients catering, quantitative and qualitative adequacy of a diets.
44. Medical examination of a nutrition unit personnel's health. Contraindications to work in public catering.
45. Hygienic principles of clinical nutrition. Characteristics of standard clinical diets.
46. Hygienic basics of preventive nutrition. Characteristics of standard preventive diets.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instruction) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English Language). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №13 Hygienic regulation of contaminants in the soil. Waste management

OBJECTIVE: **familiarize** with the hygienic requirements for site selection, construction and planning of settlements; building materials, interior decoration of dwellings;

explore sanitation and hygiene documentation of hygienic requirements for human settlements and housing;

master methods of hygienic assessment of the dwelling;

perform tasks in hygienic assessment of premises.

EQUIPMENT: methodical grant, the basic regulations.

Required theoretical knowledge

1. Epidemic value of the soil. Soil self-cleaning.
2. Hygienic control the purity of the soil on the sanitary-bacteriological parameters.
3. Hygienic characteristics of chemical environmental factors in settlements and dwellings. Waste management.
4. Hygienic standardization of the exogenous chemicals content in the soil. Principles of hygienic standardization of pollutants in the soil. Indicators of chemical pollution of soil.
5. The concept of sanitary protection of soils. The main tasks of the sanitary protection of soils.

Practical work of students

1. To learn the method of complex determination of the sanitary dangers of the soil factor.
2. Master the rules for the treatment of medical waste.

Questions for self-study

1. Dependence of endemic disease on the content of trace elements in the soil.
2. Migration and transformation of pollutants in the soil.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №14 Hygienic assessment of water supply. Systems of water supply. Sanitary control for the water supply.

OBJECTIVE: **familiarize** with the economic, hygienic, epidemic, endemic, the physiological significance of water, hygienic quality of drinking water;
examine the regulations on hygienic quality standardization and water pollution;
master the methodology for assessing the quality of drinking water;
perform the task of assessing the quality of drinking water.

EQUIPMENT: methodical grant, the basic regulations.

Required theoretical knowledge

1. Economic, hygienic, epidemic, endemic, physiological significance of water.
2. Sources and reserves of fresh water. Hygienic characteristics of the main water sources.
3. Hygienic characteristics of the systems of water supply.
4. Hygienic requirements for the quality of water.
5. Methods of water quality improvement.
6. Methods of water decontamination.
7. Sanitary supervision of water supply.

Practical work of students

1. Examine the methods of investigation and hygienic assessment of the physical and organoleptic characteristics of water quality.
2. Examine the sanitary rules and regulations on water supply and water use.
3. Solve situational tasks on the hygienic assessment of water sources and water quality.

Questions for self-study

1. Harmful chemicals entering and produced in water during its processing.
2. Comparative hygienic evaluation of physical and chemical methods of water disinfection.
3. Hygienic requirements for packaging, transport and storage of bottled drinking water in the tank.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.
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GENERAL HYGIENE

Guidelines for the 3rd year students (Faculty for International Students)

LESSON №15 Hygienic standardization of the physical parameters and chemical composition of atmospheric air of populated areas.

OBJECTIVE: **learn** the basics of hygienic regulation of air pollution, sources of pollution, the organization of the air quality monitoring;
examine the regulations on the hygiene requirements to the state of the air;
master the methodology for the air quality assessment;
perform the task of assessing the purity of air and solve situational tasks.

EQUIPMENT: methodical grant, the basic regulations.

Required theoretical knowledge

1. Hygienic evaluation of the physical properties of the air environment (microclimate, barometric pressure, electrical and radiation conditions).
2. Chemical composition of the air, its effect on the organism.
3. The main sources of air pollution. Quantitative and qualitative characteristics of the main air pollutants. Principles of prevention of adverse effects of harmful factors. Dependence of the effect on the concentration and exposure time.
4. Effect of air pollution on the sanitary conditions of the population. Hygienic diagnosis of health status in terms of air pollution.
5. Risk assessment of air pollution. Organization of the atmosphere monitoring.
6. Diseases associated with adverse influences of the environment. Immune dysfunction syndromes and multiple chemical sensitivity.

Practical work of students

1. To view the procedure for evaluating the purity of the air.
2. Determine aerosol air pollution using aspiration gravimetric method.
- 3.. Solve situational tasks.

Questions for self-study

1. Qualitative and quantitative characterization of air pollution.
2. Meteorological disease.
3. Classification of Climate. Medical Climatology.
4. Signs of hazard and adverse effect on the health of individual environmental factors (aerosols or dust, coal tar, pitch, tar, coal-heavy oils).
5. Signs of hazard and adverse effect on the health of individual environmental factors (sulfur dioxide, ammonia, nitrogen oxides).
6. Signs of hazard and adverse effect on the health of individual environmental factors (refineries emissions - the vapors of gasoline, kerosene, coolants and lubricants, tar, fuel oil).
7. Signs of the hazard and adverse effect on the health of individual environmental factors (paint production emissions - vapors of acetone, benzene, methanol, carbon tetrachloride).
8. Signs of hazard and adverse effect on the health of individual environmental factors (steel foundries emissions - vapor lead, manganese, cadmium, carbon monoxide).

Literature:

General Hygiene: Manual for the Medical Faculty of International Students (English medium of instruction) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.

GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №16 Hygienic problems of settlements and dwellings.

OBJECTIVE: **familiarize** with the hygienic requirements for site selection, construction and planning of settlements; building materials, interior decoration of dwellings;

explore sanitation and hygiene documentation of hygienic requirements for human settlements and housing;

master methods of hygienic assessment of the dwelling;

perform tasks in hygienic assessment of premises.

EQUIPMENT: methodical grant, the basic regulations.

Required theoretical knowledge

1. Hygienic requirements for the planning and construction of urban and rural locations.

2. Hygienic requirements for housing.

3. Hygienic characteristics of the physical factors of the settlements and dwellings environment.

4. Definition of health risk from noise exposure in settlements. Screening assessment of the noise factor.

Practical work of students

1. Prepare recommendations to improve the environment of populated areas and premises.

Questions for self-study

1. Impact on human health of alien chemicals (xenobiotics) coming from food.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.

2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English). – Grodno: GrSMU, 2009. – 142 p.

3. Preventive and social medicine / K. Park. – Jabalpur, 2003. – 552 p.

GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №17 Hygienic assessment of the microclimate

OBJECTIVE: **introduce** hygienic evaluation indicators of microclimate;
examine methodological materials for hygienic assessment of microclimate;
learn the methods and instruments used in hygienic practice for measuring microclimatic conditions;
perform a study to assess the complex hygienic evaluation of microclimate and studies on the reactions of the organism to the action of microclimatic conditions.

EQUIPMENT: meteometer, aspiration psychrometer, hygrometer, hygrograph, katathermometer, anemometer, thermometer, thermograph, aneroid barometer, barograph.

Required theoretical knowledge

1. Hygienic characteristics of microclimate. Mechanisms of body heat exchange with the environment
2. Temperature regimen in premises. Devices for measuring air temperature.
3. Air humidity and hygienic value of humidity. Devices for measuring air humidity.
4. Air mobility as a hygienic factor in premises. Devices for measuring speed of air mobility.
5. Methods of complex microclimate assessment. Katathermometry. Effective temperatures (ET) and equivalent effective temperature (EET).

Practical work of students

1. Hygienic assessment of the microclimate in the practice room.

Questions for self-study

1. Features of the reaction of the sick person to change weather conditions.
2. Hygienic problems of acclimatization.

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instruction) / I.A. Naumov [et al.]. – Grodno, 2013. – 200 p.
2. Lectures on General Hygiene (in schemes and tables): training visual grant for the Faculty of Foreign Students (in English Language). – Grodno, 2009. – 142 p.
3. Preventive and social medicine / K. Park. – Jabalpur, 2003. – 552 p.

GENERAL HYGIENE

Guidelines for the 2nd year students (Faculty for International Students)

LESSON №18 General hygiene credit test.

Questions for the Test

1. Hygienic evaluation of the physical properties of the air environment (microclimate, barometric pressure, electrical and radiation conditions).
2. Chemical composition of the air, its effect on the organism.
3. The main sources of air pollution. Quantitative and qualitative characteristics of the main air pollutants. Principles of prevention of adverse effects of harmful factors. Dependence of the effect on the concentration and exposure time.
4. Effect of air pollution on the sanitary conditions of the population. Hygienic diagnosis of health status in terms of air pollution.
5. Risk assessment of air pollution. Organization of the atmosphere monitoring.
6. Diseases associated with adverse influences of the environment. Immune dysfunction syndromes and multiple chemical sensitivity.
7. Hygienic requirements for the planning and construction of urban and rural locations. Hygienic requirements for housing.
8. Hygienic characteristics of the physical factors of the settlements and dwellings environment.
9. Definition of health risk from noise exposure in settlements. Screening assessment of the noise factor.
10. Hygienic characteristics of chemical environmental factors in settlements and dwellings. Waste management.
11. Epidemic value of the soil. Soil self-cleaning. Hygienic control the purity of the soil on the sanitary-bacteriological parameters.
12. Hygienic standardization of the exogenous chemicals content in the soil. Principles of hygienic standardization of pollutants in the soil.
13. Indicators of chemical pollution of soil.
14. The concept of sanitary protection of soils. The main tasks of the sanitary protection of soils.
15. Economic, hygienic and physiological significance of water.
16. The role of water in spread of the diseases.
17. Endemic diseases – biogeochemical epidemics, caused by water.
18. Zoonosis and pathogenic protozoa spread through water.
19. Viral infections and intestinal infections spread through water.
20. Sources and reserves of fresh water. Hygienic characteristics of the main water sources.
21. Hygienic characteristics of the systems of water supply.
22. Hygienic requirements for the quality of water: standards of epidemiological water quality.
23. Hygienic requirements for the quality of water: indices, characterising water quality by chemical content.
24. Hygienic requirements for the quality of water: indices of organoleptic properties of water.
25. Methods of water quality improvement.

26. Stages of water purification. Coagulation, flocculation and filtration of water.
27. Physical methods of water decontamination.
28. Chemical methods of water decontamination.
29. Advantages and disadvantages of water chlorination. Ways of water chlorination.
30. Sanitary supervision of water supply.
31. Hygienic characteristics of microclimate. Mechanisms of body heat exchange with the environment.
32. Temperature regimen in premises. Devices for measuring air temperature.
33. Air humidity and hygienic value of humidity. Devices for measuring air humidity.
34. Air mobility as a hygienic factor in premises. Devices for measuring speed of air mobility.
35. Methods of complex microclimate assessment. Katathermometry. Effective temperatures (ET) and equivalent effective temperature (EET).

Literature:

1. General Hygiene: Manual for the Medical Faculty of International Students (English medium of instr.) / I.A. Naumov [et al.]. – Grodno: GrSMU, 2013. – 200 p.
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3. Preventive and social medicine / K. Park. – Jabalpur, 2003. – 552 p.