


<p>ОҢТҮСТІК-ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ</p>		<p>SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»</p>
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METHODOLOGICAL INSTRUCTIONS FOR INDEPENDENT WORK OF STUDENTS

Discipline: Pathological physiology of organs and systems


Discipline Code: POS 3202-1

Specialty: 6B10101 - "General Medicine"


Training hours (credits): 150 hours / 5 credits

Course and semester of study: III course, VI semester

Independent work of students: 100 hours


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Methodical recommendations for independent work of students were developed in accordance with the work program of the discipline (syllabus) EP 6B130100-"General Medicine" and discussed at a meeting of the department

Protocol No. 10² from " 6 " 06 2022
 Head Department  Zhakipbekova G.S.

Guidelines number 1

1. **Topic:** Respiratory distress syndrome .

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2. Purpose: And to study the etiopathogenesis of respiratory distress syndrome .

3. Tasks :

1. Prepare literature on the topic of the lesson.
2. To study and analyze theoretical material.
- 3 . Prepare a presentation on the topic of the lesson.
4. Briefly and readily present the presentation material.
5. Be prepared to answer questions about the presentation.
- 4. Implementation form:** preparation and protection of the presentation .
- 5. Performance and assessment criteria:** see Appendix No. 1 .
- 6. Delivery deadlines:** on 1-2 weeks.
- 7. Literature:** see Appendix No. 2 .

8. Control

Questions


1. What is external respiratory failure ?
2. Obstructive and limited types of hypoventilation ?
3. What are respiratory dysregulations?
4. Etiopathogenesis of RDS syndrome (Respiratory distress syndrome) ?
5. What is the main link in the pathogenesis of RDS (Respiratory Distress Syndrome) ?
6. Pathogenetic factors of the syndrome of RDS (Respiratory distress syndrome) ?
7. Features of the syndrome of RDS (respiratory distress syndrome) in children ?

Tests

1. It is important for the pathogenesis of alveoli Nogo and capillary damage in adults with RDS (respiratory distress -sindrom) :
 A) effect of interleukins and factors ischemia
 B) the effect of superoxide dismutase
 C) the effect of the opioid x peptide s
 D) the effect of antipeptides
 E) effectiveness t catalase
2. Common symptoms of the syndrome RDS (respiratory distress -sindrom) :
 A) Hyper about sleep apnea
 B) VAT increase
 C) hypoxemia, ineffective oxygen therapy
 D) hyperoxia, hypercapnia
 E) Tiffno Index 70%
3. The main sequence of the pathogenesis of RDS (Respiratory Distress Syndrome) of newborns is :
 A) hyaline deposition in the walls of the cells
 B) surfactant deficiency
 C) reduction of lung tissue extensibility
 D) upper airway obstruction
 E) reduction of small bronchi

Guidelines No. 2

- 1. Topic:** Rheumatism .
- 2. Objective:** To explore the causes and mechanisms of p evmatizm well .
- 3. Assignments**
 1. Prepare literature on the topic of the lesson.

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2. To study and analyze theoretical material.
- 3 . Prepare a presentation on the topic of the lesson.
4. Briefly and readily present the presentation material.
5. Be prepared to answer questions about the presentation.
- 4. Implementation form:** preparation and protection of the presentation.
- 5. Performance and assessment criteria:** see Appendix No. 1 .
- 6. Delivery:** on the 2nd week.
- 7. Literature:** see Appendix No. 2 .

8. Control

Questions


1. The etiology of rheumatism?
2. Classification of rheumatism?
- 3 . The pathogenesis of rheumatism?
4. The nature of the rheumatic disorder ?
5. Features of rheumatoid polyarthritis?
6. Etiopathogenesis of rheumatic heart disease?
7. Features of rheumatism in children?

Tests

1. P Signs of acute rheumatic fever is NOT:
 - A) ulcerative necrotic valvulitis
 - B) Mucoid swelling
 - C) Rheumatic granuloma
 - D) Fibrinoid necrosis
 - E) Sclerosis
2. What are the great diagnostic criteria for acute rheumatic fever:
 - A) Polyarthritis
 - C) Temperature increase
 - C) Lymphadenopathy
 - D) Tachycardia
 - E) Increased titers of antistreptococcal antibodies
3. What determines the severity of rheumatic fever and its prognosis:
 - A) Cardit
 - C) Polyarthritis
 - C) Chorea
 - D) Rheumatic nodules
 - E) Ring-shaped erythema

Guidelines No. 3

- 1. Topic:** Non-coronary heart disease
- 2. Purpose:** to study the causes and mechanisms of the development of non-coronarogenic pathology of the heart .
- 3. Assignments**
 1. Prepare literature on the topic of the lesson.
 2. To study and analyze theoretical material.
 - 3 . Prepare a presentation on the topic of the lesson.
 4. Briefly and readily present the presentation material.
 5. Be prepared to answer presentation questions

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4. Implementation form: preparation and protection of the presentation.

5. Performance and assessment criteria: see Appendix No. 1.

6. Delivery: on the 3rd week.

7. Literature: see Appendix No. 2.

8. Control

Questions

1. Necronarogenic necrosis, main types, pathogenesis and significance in cardiac pathology ?
2. Hypertrophic hereditary cardiomyopathy , a characteristic of morphofunctional changes ?
4. What is restrictive cardiomyopathy ?
5. Etiology in myocarditis ?
6. Endocarditis, definition, etiology ?

Tests

1. What infectious agents are the main cause of myocarditis in temperate countries?
 - A. Staphylococci;
 - B. diphtheria bacillus;
 - B. Enteroviruses ;
 - G. Actinomyces;
 - D. Trypanosomes.
2. What class of immunoglobulins predominantly increases in acute forms of infectious myocarditis?
 - A. IgA;
 - B. IgM;
 - In . IgG;
 - G. IgE .
3. Choose the MOST probable change in echocardiography characteristic of patients with idiopathic dilated cardiomyopathy?
 - A) Dilation of the cavities of the heart
 - C) Focal myocardial hypokinesia
 - C) Aortic sclerosis
 - E) Hypertrophy of the walls of the right ventricle
 - E) Hypertrophy of the walls of the left ventricle


Guidelines No. 4

1. Topic: Atherosclerosis

2. Objective: To explore the causes and mechanisms of development of atherosclerosis coronary insufficiency.

3. Assignments

1. Prepare literature on the topic of the lesson.
 2. To study and analyze theoretical material.
 3. Prepare a presentation on the topic of the lesson.
 4. Briefly and readily present the presentation material.
 5. Be prepared to answer questions about the presentation.
- 4. Implementation form:** preparation and protection of the presentation.
- 5. Performance and assessment criteria:** see Appendix No. 1.
- 6. Delivery:** on the 4th week.
- 7. Literature:** see Appendix No. 2.

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8. Control

Questions

1. Violations of vascular tone. Atherosclerosis.
2. Etiology of atherosclerosis.
3. Atherosclerosis risk factors.
4. Modern theories of the occurrence of atherosclerosis.
5. Pathophysiological mechanisms of the onset and development of atherosclerosis.
6. The pathogenesis of atherosclerosis.
7. Complications of atherosclerosis.
8. Principles of prevention and therapy of atherosclerosis.

Tests

1. The formation of “foamy cells” is associated with the accumulation of lipids in
 - A) neutrophils
 - B) macrophages
 - C) lymphocytes
 - D) red blood cells
 - E) endothelial cells
2. Everything except complications of atherosclerosis
 - A) arterial thrombosis
 - B) vein thrombosis
 - C) thromboembolism
 - D) cerebrovascular accident
 - E) coronary heart disease
3. Prevents activation of lipid peroxidation in coronary insufficiency
 - A) increase in the content of prooxidants and substrates in the myocardium LPO
 - B) decreased activity of antioxidants
 - C) postischemic reperfusion
 - D) excess catecholamines in the heart
 - E) increased activity of superoxide dismutase and catalase in cardiomyocytes

Guidelines No. 5

1. Topic: cerebrovascular accident .

2. Objective: To explore the causes and mechanisms of development of n arusheniya cerebral circulation .


3. Assignments

1. Prepare literature on the topic of the lesson.
2. To study and analyze theoretical material.
- 3 . Prepare a presentation on the topic of the lesson.
4. Briefly and readily present the presentation material.
5. Be prepared to answer questions about the presentation.
- 4. Implementation form:** preparation and protection of the presentation.
- 5. Performance and assessment criteria:** see Appendix No. 1 .
- 6. Delivery dates:** on the 5th week.
- 7. Literature:** see Appendix No. 2 .

8. Control

Questions

1. What is a stroke?

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2. Etio logy stroke?
3. Classification of stroke?
4. What is ischemic stroke ?
5. The pathogenesis of stroke?
6. The difference between hemorrhagic stroke and ischemic stroke?
7. What is an ischemic attack?
8. The difference between ischemic attack and stroke?

Tests

1. Minor stroke - a case of stroke, in which cerebral or focal symptoms completely regress:
 - A) for a period of 2 days to 3 weeks from the onset of the disease
 - B) within a month
 - C) during the day
 - D) within 2-3 weeks
 - E) for 2-4 hours
2. With parenchymal- subarachnoid hemorrhage, the mandatory clinical manifestation is:
 - A) loss of consciousness
 - B) the displacement of the middle structures
 - C) bloody cerebrospinal fluid
 - D) pallor of the skin
 - E) loss of consciousness , pallor of the skin
- 3 . Motor aphasia occurs in right-handed people with stroke:
 - A) in the pool of the left internal carotid artery
 - B) in the pool of the right internal carotid artery
 - C) in the vertebral-basilar basin


Guidelines No. 6

1. **Topic:** Peptic ulcer of the stomach and duodenum .
2. **Purpose:** to study the etiopathogenesis of peptic ulcer of the stomach and duodenum .
3. **Assignments**
 1. Prepare literature on the topic of the lesson.
 2. To study and analyze theoretical material.
 - 3 . Prepare a presentation on the topic of the lesson.
 4. Briefly and readily present the presentation material.
 5. Be prepared to answer questions about the presentation.
4. **Implementation form:** preparation and protection of the presentation.
5. **Performance and assessment criteria:** see Appendix No. 1.
6. **Delivery dates:** on the 6th week.
7. **Literature:** see Appendix No. 2.

8. control

Questions

- 1 . What are digestive disorders?
2. Causes of digestive upsets?
3. Etiopathogenesis of peptic ulcer
4. Causes of gastric and duodenal ulcer?
5. The main symptoms of peptic ulcer ?
6. Age features of digestive disorders?
7. Frequency of occurrence in adults and children

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Tests

1 . Factors contributing to the development of peptic ulcer include

- A) n transpose ability to regenerate mucosa
- C) n reduced production of leukotrienes C₄ and D₄
- C) n transpose of prostaglandins E₁ and E₂
- D) n transpose the mucus in the stomach
- E) n transpose the secretion of bicarbonates

2. The walls often develop

- A) Ulcerative th diseases s stomach and duodenum
- B) coronary th diseases s heart
- C) gallstone Single diseases v
- D) hypertensive th diseases s
- E) Sugar first diabetes

3. The more frequent development of gastric ulcer in people of the first blood group refers to ... reactivity.

- A) is individual th
- C) non-specific
- C) specific
- D) species
- E) group

Guidelines number 7

1. **Topic:** Milestone control number 1.

2. **Objective:** To consolidate the material passed over the 7 -time s .

3. Assignments

1. Perform test tasks on topics covered.

4. Execution form

1. Performing test tasks (testing).

5. **Performance and assessment criteria:** see Appendix No. 1.

6. **Delivery:** on the 7th week.

7. **Literature:** see Appendix No. 2.

8. Control

Guidelines number 8

1. **Topic:** Syndrome de Toni- Debre - Fanconi

2. **Purpose:** To study the causes and mechanisms of development of the Syndrome de Toni- Debre - Fanconi

3. Assignments

1. Prepare literature on the topic of the lesson.

2. To study and analyze theoretical material.

3 . Prepare a presentation on the topic of the lesson.

4. Briefly and readily present the presentation material.

5. Be prepared to answer questions about the presentation.


4. **Implementation form:** preparation and protection of the presentation.

5. **Performance and assessment criteria:** see Appendix No. 1.

6. **Delivery dates:** on the 8th week.

7. **Literature:** see Appendix No. 2.

8. Control

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Questions

- 1 . What is Syndrome de Toni- Debre - Fanconi
2. Etiology and pathogenesis Syndrome de Toni- Debre - Fanconi
3. Classification Syndrome de Toni- Debre - Fanconi
4. Features of the syndrome de Toni- Debre - Fanconi in children?

Tests

1. Loss of phosphorus leads to the development of rickets, and in older children and adults - to ...
A) osteomalacia.
B) navel stones
C) ascites
C) pyelonephritis
D) glomerulonephritis
- 2 . The loss of amino acids and bicarbonate contributes to the development of ...
A) metabolic acidosis
B) metabolic alkalosis
C) glomerulonephritis
C) glycemia
E) hypercalcemia
3. The expanded symptom complex is formed by ...
A) the second year of life.
B) the first year of life.
C) manifests in 5-6 years
C) 8 - 12 years
D) in the second half of life

Guidelines No. 9

1. Topic: Nephrolithiasis

2. Objective: And such causes and mechanisms of development of nephrolithiasis .


3. Assignments

1. Prepare literature on the topic of the lesson.
 2. To study and analyze theoretical material.
 - 3 . Prepare a presentation on the topic of the lesson.
 4. Briefly and readily present the presentation material.
 5. Be prepared to answer questions about the presentation.
- 4. Implementation form:** preparation and protection of the presentation.
- 5. Performance and assessment criteria:** see Appendix No. 1.
- 6. Delivery dates:** on the 9th week.
- 7. Literature:** see Appendix No. 2.

8. Control

Questions

- 1 . What is nephrolithiasis?
- 2 . The etiology and pathogenesis of nephrolithiasis well ?
3. What is urolithiasis?
4. Pathogenic factors leading to kidney stones?
5. Features of urolithiasis in children?
6. What is acute renal failure ?
7. What is kidney failure?

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8. Reasons n Spot metering th insufficiency and ?

Tests

1. Massive edema spread over the whole body is
 - A) anasarca
 - B) ascites
 - C) hydropericardium
 - D) hydrothorax
2. Evaluate Zimnitsky's test: -day diuresis - 900 ml, nocturnal diuresis - 300 ml, -relations in the relative density of urine 1010-1026 -liquid portion of the water-food ration is 1500 ml
 - A) violation of water excretion function
 - B) violation of concentration function
 - C) violation water excretion and concentration functions
 - D) norm
3. An attack of severe lower back pain with irradiation along the ureter to the inguinal region is observed with
 - A) glomerulonephritis
 - B) pyelonephritis
 - C) cystitis
 - D) urolithiasis

Guidelines number 10

1. **Topic:** Blood volume disorders. Blood loss .
2. **Purpose:** to study the etiopathogenesis to loss .
3. **Assignments**
 1. Prepare literature on the topic of the lesson.
 2. To study and analyze theoretical material.
 - 3 . Prepare a presentation on the topic of the lesson.
 4. Briefly and readily present the presentation material.
 5. Be prepared to answer questions about the presentation.
4. **Implementation form:** preparation and protection of the presentation.
5. **Performance and assessment criteria:** see Appendix No. 1.
6. **Delivery dates:** on the 1st 0th week.
7. **Literature:** see Appendix No. 2.


8. Control

Questions

- 1 . What is a blood volume disorder?
- 2 . The etiology of disorders of blood volume?
3. What is hypo and hypervolemia I?
4. What is the pathogenesis of hypo and hypervolemia ?
5. Types of blood loss?
6. Symptoms and consequences of blood loss?
7. Features in children?

Tests

1. Blood loss at the Algovor index - Gruber 1,5 and more
 - A) 40% of the volume of circulating blood
 - C) 30% of the volume of circulating blood
 - C) 20% of the volume of circulating blood

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- D) 10% of the volume of circulating blood
- E) 5% of the volume of circulating blood
- 2. With venous bleeding from limb veins should be taken
 - A) immobilization of the limb
 - B) apply a pressure bandage
 - C) lay the victim
 - D) start replenishment of blood loss
 - E) deliver to the hospital
- 3. During a blood transfusion, the patient's condition worsened, there was pain in the lower back and behind the sternum, headache, dizziness, general weakness, this indicates
 - A) hemorrhagic shock
 - B) citrate shock
 - C) blood transfusion shock
 - D) anaphylactic reaction
 - E) pyrogenic reaction

Guidelines No. 11

1. Theme: DIC .

2. Purpose: to study the general etiology and pathogenesis of DIC syndrome a .

3. Assignments

1. Prepare literature on the topic of the lesson.
2. To study and analyze theoretical material.
3. Prepare a presentation on the topic of the lesson.
4. Briefly and readily present the presentation material.
5. Be prepared to answer questions about the presentation.

4. Implementation form: preparation and protection of the presentation.

5. Performance and assessment criteria: see Appendix No. 1.

6. Timing of delivery: 1 1 st week.

7. Literature: see Appendix No. 2.


8. Control

Questions

1. What is DIC?
2. What is the etiopathogenesis of DIC ?
3. Causes of DIC?
4. What are the types of DIC ?
5. Diagnostic criteria for DIC ?
6. The result of ICE syndrome?

Tests

1. The most common cause of the development of ICE in septic shock:
 - A) Coagulopathy consumption
 - B) Coagulopathy breeding
 - C) Thrombocytopenia , thrombocytopenia
 - E) Cytokine release
 - E) blockage of microcirculation
2. What is the reason for the development of multiple organ failure in DIC?
 - A) inhibition of tissue respiration by fibrinogen degradation products
 - C) blockade of microcirculation

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- C) thrombin damage to plasma membranes of vital organs
- D) thrombin damage to lysosomal membranes
- E) immunocomplex syndrome
- 3. What is the mechanism of action of transfusions of freshly frozen donor plasma in DIC?
- A) binding of fibrinogen degradation products
- C) replenishment of coagulation factors and natural anticoagulants consumed
- C) a decrease in platelet aggregation ability
- D) a decrease in the concentration of DIC activators in the bloodstream
- E) removal of cellular antigens

Guidelines number 1 2

- 1. Topic:** Autoimmune mechanisms of endocrine disorders
- 2. Purpose:** to study the causes and mechanisms of the development of autoimmune mechanisms of endocrine disorders
- 3. Assignments**
 1. Prepare literature on the topic of the lesson.
 2. To study and analyze theoretical material.
 - 3 . Prepare a presentation on the topic of the lesson.
 4. Briefly and readily present the presentation material.
 5. Be prepared to answer questions about the presentation.
- 4. Implementation form:** preparation and protection of the presentation.
- 5. Performance and assessment criteria:** see Appendix No. 1.
- 6. Delivery:** on the 12th week.
- 7. Literature:** see Appendix No. 2.


8. Control

Questions

1. What is autoimmune chronic thyroiditis ?
2. What is the etiopathogenesis of Hashimoto 's thyroiditis ?
3. Hashimoto 's classification of thyroiditis ?
4. Signs of Hashimoto 's thyroiditis ?
5. Features of Hashimoto 's thyroiditis in children?
6. Frequency of occurrence?
7. What are the pathophysiological principles for the prevention and treatment of Hashimoto 's thyroiditis ?

Tests

- 1 . Thyrotoxic syndrome can occur:
 - A) With diffuse toxic goiter
 - B) With goiter Hashimoto
 - B) In subacute thyroiditis
 - D) With primary atrophy of the thyroid gland
 - E) With TSH-secreting pituitary tumor
2. For the diagnosis of autoimmune thyroiditis, it is necessary:
 - A) Determine the titer of antibodies to thyroid tissue components
 - B) Perform an ultrasound of the thyroid gland
 - C) Identify the clinical manifestations of hypothyroidism

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D) Confirm hypothyroidism with laboratory data on the plasma levels of thyroid hormones and TSH

D) Perform all of the above

3. The clinical picture of autoimmune thyroiditis is characterized by:

- A) Acute development of the disease
- C) Slow development over several years
- 3) Enlarged regional lymph nodes
- 4) Prolonged subfebrile condition
- 5) Soreness of the thyroid gland during palpation

Guidelines No. 13

1. **Topic:** Endemic goiter .

2. **Objective:** To explore the causes and mechanisms of development of endemic goiter and.

3. Assignments

- 1. Prepare literature on the topic of the lesson.
- 2. To study and analyze theoretical material.
- 3. Prepare a presentation on the topic of the lesson.
- 4. Briefly and readily present the presentation material.
- 5. Be prepared to answer questions about the presentation.
- 4. **Implementation form:** preparation and protection of the presentation.
- 5. **Performance and assessment criteria:** see Appendix No. 1.

6. **Delivery:** on the 1st 3rd week.

7. **Literature:** see Appendix No. 2.


8. Control

Questions

- 1. What is an endemic goiter?
- 2. What etiopathogenesis of endemic goiter and ?
- 3. Classification of endemic goiter eh?
- 4. Signs of endemic goiter eh?
- 5. Features of endemic goiter and the children?
- 6. Frequency of occurrence?
- 7. What are the pathophysiological principles for the prevention and treatment of endemic goiter?

Tests

- 1. With insufficient iodine content in food develops
 - A) diffuse toxic goiter
 - B) obesity
 - C) diabetes
 - D) endemic goiter
- 2. A disease in which tachycardia, exophthalmos, tremor are observed
 - A) hypothyroidism
 - B) thyrotoxicosis
 - C) diabetes
 - D) endemic goiter
- 3. In the diagnosis of thyroid diseases, the determination in the blood is important
 - A) white blood cells, ESR
 - B) hemoglobin, color index

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C) hormones T3, T4, TTG

D) insulin, glucagon

Guidelines No. 14

1. Topic: Rheumatoid Arthritis

2. Objective: To study the causes and mechanisms of p evmatoidny arthritis as well.

3. Assignments

1. Prepare literature on the topic of the lesson.
2. To study and analyze theoretical material.
3. Prepare a presentation on the topic of the lesson.
4. Briefly and readily present the presentation material.
5. Be prepared to answer questions about the presentation.

4. Implementation form: preparation and protection of the presentation.

5. Performance and assessment criteria: see Appendix No. 1.

6. Delivery dates: on the 1st 4th week.

7. Literature: see Appendix No. 2.

8. Control

Questions

1. What is the p evmatoidny arthritis ?
2. What is the etiopathogenesis p evmatoidn th arthritis as well ?
3. Classification p evmatoidn th arthritis as well?
4. Signs p evmatoidn th arthritis as well?
5. Features p evmatoid Foot arthritis as well?
6. Frequency p evmatoidn th arthritis as well?
7. What are the pathophysiological principles of prevention and treatment of p evmatoidn th arthritis as well ?

Tests

1. Select characteristic immunological changes in RA

A) The appearance of antinuclear antibodies.

B) Determination of rheumatoid factor.

C) Hypocomplementemia .

D) The appearance of anticardiolipin antibodies.

E) The appearance of antibodies to a cyclic citrulline peptide.

2. Select the correct statements regarding rheumatoid nodules:

A) Found in 25-50% of patients with RA.

B) Contain crystals of urate .

B) Often there is ulceration of the skin above them with the release of a pasty mass.

D) The most frequent localization: on the extensor surface of the elbow joint and over the small joints of the hands.

E) Morphologically represent a focus of fibrinoid necrosis surrounded by macrophages, plasma cells, lymphocytes .

3. Indicate the main variants of the course of RA:

A) Spicy.

B) Slowly progressing.

C) Interictal.

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D) Chronic.

E) Rapidly progressive.

Guidelines No. 15

1. Topic: Milestone control No. 2

2. Objective: To consolidate the material passed for 15 -time s .

3. Assignments

1. Perform test tasks on topics covered.

4. Execution form

1. Performing test tasks (testing).

5. Performance and assessment criteria: see Appendix No. 1 .

6. Delivery: on the 15th week.

7. Literature: see Appendix No. 2 .

8. Control


Appendix No.1

Form of control	Mark	Criteria for marks
Evaluation of preparation and performing of presentation	<p>Excellent corresponds to points 95-100 90-94</p>	The student prepared a presentation on the topic at the appointed time, independently, accurately, with a volume of at least 20 laconic and substantial slides, using at least 5 literary sources and the presence of a detailed plan, cited the schemes, tables and figures corresponding to subject, with the defense demonstrated a profound knowledge of the topic and answered all questions positively on all the questions asked.
	<p>Good corresponds to points 85-89 80-84 75-79</p>	The student prepared a presentation on the topic at the appointed time, independently, accurately, with a volume of at least 20 laconic and substantial slides, using at least 5 literary sources and the presence of a detailed plan, cited the schemes, tables and figures, corresponding to the subject, in defense demonstrated good knowledge of the subject, when answering question he committed non-fundamental errors.
	<p>Satisfactorily corresponds to points 70-74 65-69 60-64 50-54</p>	The student prepared a presentation on the topic at the appointed time, independently, but inaccurately, a volume of at least 20 unsupported slides, using less than 5 literary sources and the presence of an undeveloped plan, resulted in a lack of schemes, templates and drawings corresponding to subject, defending uncertainly answered questions, made fundamental mistakes.

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	<p>Unsatisfactory corresponds to points 0-49</p>	<p>The student did not prepare a presentation on the topic at the appointed time, or prepared it at the appointed time, but independently, inaccurately, with a volume of less than 20 non-editorial slides, without mentioning literary sources, in the absence of a plan, when answering a question, dew made gross mistakes or could not answer questions and did not defend the abstract.</p>
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Form of control	Mark	Criteria for marks
Evaluation of preparation of the abstract	<p>Excellent corresponds to points 95-100 90-94</p>	<p>The student prepared an abstract on the topic at a scheduled time, independently, neatly, with a volume of at least 10 pages of the A4 format computer kit with a single interlacing interval and a font size of 14, using at least 5 liter sources and the availability of a detailed plan , he brought diagrams, tables and figures corresponding to the subject, while reading the abstract, he did not read the text, but told, confidently and unerringly answered all the questions posed.</p>
	<p>Good corresponds to points 85-89 80-84 75-79</p>	<p>The student prepared an abstract on the topic at a scheduled time, independently, neatly, with a volume of at least 10 pages of the A4 format computer kit with a single interlacing interval and a font size of 14, using at least 5 liter sources and the availability of a detailed plan , he brought the diagrams, tables and figures corresponding to the subject, did not read the text while defending the essay, but told me that in answering questions he made unprincipled errors.</p>
	<p>Satisfactorily corresponds to points 70-74 65-69 60-64 50-54</p>	<p>The student prepared an abstract on the topic at the appointed time, independently, but inaccurately, with a minimum of 10 pages of computer-aided A4 format with a single inter-dural interval and a font size of 14, using less than 5 literary sources and the availability neravvernutogo plan, with the protection of the abstract the text read, answered questions in an inordinate manner, made fundamental mistakes.</p>
	<p>Unsatisfactory corresponds to points</p>	<p>The student did not prepare an essay on the topic at the appointed time, or prepared it at</p>

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	0-49	the appointed time, but it is not dependent, inaccurately, with a volume of less than 10 pages of a computer set of A4 format with a different line spacing and font size, without indicating the sources of literature , in the absence of a plan, when reading the abstract, the text read, when answering questions, made gross mistakes or could not answer questions and did not defend the abstract.
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Midterm examination – MCQ, maximum mark is 100.

Form of control	Mark	Criteria for marks
Evaluation of MCQ results	Excellent corresponds to points 95-100 90-94	The student did correctly 90-100% of the MCQ.
	Good corresponds to points 85-89 80-84 75-79	The student did correctly 70-89% of the MCQ.

Appendix No.2


Literature main and additional

**In Russian
main:**

1. Адо А.Д. Патофизиология: учебник: в 2-х т. – Эверо, 2015. – Т. 1.
2. Адо А.Д. Патофизиология: учебник: в 2-х т. – Эверо, 2015. – Т. 2.
3. Патофизиология. Руководство к практическим занятиям: учебное пособие. – М.: ГЭОТАР-Медиа, 2014.
4. Фролов В.А. и др. Общая патологическая физиология: учебник. – М., 2013.

additional:

1. Патофизиология. Руководство к практическим занятиям: учебное пособие /Под ред. В.В. Новицкого, О.И. Уразовой. – М.: ГЭОТАР-Медиа, 2011.
2. Патофизиология: учебник: в 2-х т. /Под ред. В.В. Новицкого, Е.Д. Гольдберга, О.В. Уразовой. – 4-е изд., перераб. и доп. – М.: ГЭОТАР-Медиа, 2010. – Т. 1.
3. Патофизиология: учебник: в 2-х т. /Под ред. В.В. Новицкого, Е.Д. Гольдберга, О.В. Уразовой. – 4-е изд., перераб. и доп. – М.: ГЭОТАР-Медиа, 2010. – Т. 2.
4. Литвицкий П.Ф. Патофизиология: учебник. – 4-е изд., испр. и доп. – М.: ГЭОТАР-Медиа, 2010.

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5. Актуальные вопросы патофизиологии и медицины: материалы Междунар. науч.-практич. конф. (2-4 дек., 2008). – Алматы, 2008.

e-resources:

1. Патофизиология [Электронный ресурс]: учебник: в 2-х т. /Под ред. В.В. Новицкого, Е.Д. Гольдберга, О.В. Уразовой. – 4-е изд., перераб. и доп. – Электрон. текстовые дан. (59,9 Мб). – М.: ГЭОТАР-Медиа, 2010. – Т. 1, Т. 2. – Эл. опт. диск (CD-ROM).
2. www.ukma.kz

In Kazakh

main:

1. Нұрмұхамбетұлы Ә. Патофизиология-1. Клиникалық практикада өте маңызды біртектес дерттік үрдістердің патогенезі мен емдеу жолдарына нұсқама. 1 том: оқу құралы. – Алматы: Эверо, 2016.
2. Нұрмұхамбетұлы Ә. Патофизиология-1. Клиникалық практикада өте маңызды біртектес дерттік үрдістердің патогенезі мен емдеу жолдарына нұсқама. 2 том: оқу құралы. – Алматы: Эверо, 2016.
3. Нұрмұхамбетұлы Ә. Патофизиология: оқулық. – 4 бас. – Эверо, 2015. – Т. 1.
4. Нұрмұхамбетұлы Ә. Патофизиология: оқулық. – 4 бас. – Эверо, 2015. – Т. 2.
5. Нұрмұхамбетұлы Ә. Патофизиология: оқулық. – 4 бас. – Эверо, 2015. – Т. 3.
6. Нұрмұхамбетұлы Ә. Патофизиология: оқулық. – 4 бас. – Эверо, 2015. – Т. 4.
7. Адо А.Д. Патофизиология: оқулық. 1 том. – Эверо, 2015.
8. Адо А.Д. Патофизиология: оқулық. 2 том. – Эверо, 2015.
9. Патологиялық физиология. Тәжірибелік сабақтарға нұсқау: оқу құралы. – М.: ГЭОТАР-Медиа, 2014.
10. Уразалина Н.М. Тест тапсырмалары. I-бөлім. Біріктес дерттік үрдістер. –Алматы: Эверо, 2014.
11. Уразалина Н.М. Тест тапсырмалары. II-бөлім. Біріктес дерттік үрдістер. –Алматы: Эверо, 2014.
12. Уразалина Н.М. Тест тапсырмалары. III-бөлім. Біріктес дерттік үрдістер. –Алматы: Эверо, 2014.
13. Уразалина Н.М. Тест тапсырмалары. IV-бөлім. Біріктес дерттік үрдістер. –Алматы: Эверо, 2014.
14. Жәутікова С.Б. Мамандырылған патологиялық физиология курсы: оқу-әдістемелік құралы. – Қарағанды: ЖК «Ақ Нұр», 2013.
15. Жәутікова С.Б. Патологиялық физиология пәні бойынша ситуациялық есептер жинағы: оқу-әдістемелік құралы. – Қарағанды: ЖК «Ақ Нұр», 2013.

additional:

1. Патофизиология мен медицинаның өзекті мәселелері: ғыл.-практикалық халықаралық конф. материалдары (2-4 желтоқсан, 2008). – Алматы, 2008.

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1. Патологиялық физиология: Патофизиология: тәжірибелік сабақтарға нұсқау: оқу құралы/ В.В. Новицкийдің ред. – М.: ГЭОТАР-Медиа, 2014.
2. www.ukma.kz

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main:

1. Pathophysiology. Volume 1: the book for medical institutes /A.D. Ado and others. – Almaty: «Evero», 2017.
2. Pathophysiology. Volume 2: the book for medical institutes /A.D. Ado and others. – Almaty: «Evero», 2017.
3. Pathophysiology. Volume 3: the book for medical institutes /A.D. Ado and others. – Almaty: «Evero», 2017.

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4. Zhautikova. S.B. Review of Pathophysiology: educational-methodical manual /S.B. Zhautikova. U. Faroog. – Karaganda: AKNUR, 2017.
5. Zhautikova. S.B. Collection of situational problems for discipline of Pathological Physiology-2: educational-methodical manual /S.B. Zhautikova. U. Faroog. – Karaganda: AKNUR, 2017.
6. Essentials of Pathophysiology: Concepts of Altered Health States /Porth C.M.; Lippincott Williams & Wilkins /Wolters Kluwer, 2014.
7. Pathophysiology: Concepts of Altered Health States /Porth C.M., Matfin G.; Lippincott Williams & Wilkins /Wolters Kluwer, 2013.

additional:

- 1.Pathophysiology /Copstead L.C., Banasik J.L.; Saunders /Elseviere, 2012.

e-resources:

1. www.ukma.kz

E-sources

№	Title	Link
1.	«BooksMed»	http://www.booksmed.com
2.	«Web of science» (Thomson Reuters)	http://apps.webofknowledge.com
3.	«Science Direct» (Elsevier)	https://www.sciencedirect.com
4.	«Scopus» (Elsevier)	www.scopus.com
5.	PubMed	https://www.ncbi.nlm.nih.gov/pubmed

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