

Methodical recommendations  
Practical class of the discipline Pediatrics, 4th course  
222 "Medicine"

**Topic:** Functional gastrointestinal disorders in young children

**Place of the class:** regional children's clinical hospital, children's polyclinic

**Number of hours:** 6

**The purpose** of the lesson: to acquaint students with the etiology, pathogenesis, classification, clinical course, diagnosis and differential diagnosis of chronic eating disorders in children.

**Students must:**

**Know:**

1. Concept of dyspepsia
2. Classification, etiology and pathogenesis of dyspepsia.
3. Diet therapy depending on the degree of dyspepsia.
4. Basics of parenteral nutrition.
5. Pharmacotherapy.
6. Prevention.

**Be able:**

1. Carry out a clinical examination of the patient.
2. Carry out differential diagnosis.
3. Make and justify the diagnosis.
4. Interpret laboratory data.
5. Make a treatment plan.
6. Make a plan of rehabilitation measures.
7. to be familiar with: the prevalence of chronic eating disorders and the structure of mortality among children in the world, in Ukraine and the Sumy region.

**Main questions:**

1. Prevalence of functional gastrointestinal disorders in young children
2. Modern classification of functional gastrointestinal disorders in young children
3. Pathogenesis of the development of functional gastrointestinal disorders in young children
4. Classification of functional gastrointestinal disorders in young children
5. Clinical features of variants of functional gastrointestinal disorders in young children
6. Diagnosis of functional gastrointestinal disorders in young children
7. Peculiarities of diet therapy for functional gastrointestinal disorders in young children
8. Drug therapy of functional gastrointestinal disorders in young children

**Lesson plan and organizational structure:**

N	Type of work	Time, min
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	60
3.	Purpose of the research plan	60
4.	Appointment of emergency therapy	60
5.	Purpose of treatment	60
6.	Features of prevention and rehabilitation	60
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

**Recommended Books:**

**Basic literature**

1. Nelson Textbook of Pediatrics, 20th edition / Robert M. Kliegman, Bonita F. Stanton, Nina F. Schor [et al.] // London: Elsevier, 2016. - 3880 p.
2. Pediatrics: textbook / O. V. Tiazhka, T. V. Pochinok, A. M. Antoshkina etc. ; edited by O.V. Tiazhka. — 3-rd edition, reprint. — Vinnytsia : Nova Knyha, 2018. — 544 p
3. USMLE Step 2 CK: Pediatrics: Lecture Notes / Editors W.G. Cvetnic, E. Pino. — New York : Kaplan, 2019. — 281 p.

**Supporting literature**

1. CURRENT Diagnosis and Treatment Pediatrics, Twenty-Fifth Edition / William W. Hay, Myron J. Levin, Mark J. Abzug, Maya Bunik. McGraw-Hill Education OH, United States, 2020. – 1520 p.
2. Nelson Textbook of Pediatrics, 2-Volume Set 21st Edition/ Robert M. Kliegman, Joseph St. Geme. Elsevier; 21st Edition, 2019. – 4264 p.
3. Zitelli and Davis' Atlas of Pediatric Physical Diagnosis, 7th Edition/ Basil J. Zitelli, Sara C McIntire, Andrew J Nowalk. Elsevier; 2017. – 1016 p.
4. Red Book®: 2018 Report of the Committee on Infectious Diseases, 31st Edition / Editor: David W. Kimberlin, MD, FAAP. American Academy of Pediatrics, 2018. – 1213 p.

### **Information resources on the Internet**

- 1 European Pediatric Association, the Union of National European Pediatric Societies and Associations (EPA/UNEPSA) <http://www.epa-une psa.org/>
- 2 American Academy of Pediatrics Policy (AAP Policy) Clinical Practice Guidelines <https://www.aap.org>
- 3 The European Society for Emergency Medicine <http://eusem.org>
- 4 The National Association of State EMS Officials <https://nase mso.org/>

Author:

prof. Serhiy Popov

Methodical recommendations  
Practical class of the discipline Pediatrics, 4th course  
222 "Medicine"

**Topic:** Rickets. Hypervitaminosis D. Spasmophilia.

**Place of the class:** regional children's clinical hospital, children's polyclinic

**Number of hours:** 6

**Purpose:** To be able to timely diagnose and prescribe adequate therapy and prevention of rickets, hypervitaminosis, spasmophilia in children.

**Relevance of the topic:** Rickets, hypervitaminosis, spasmophilia are classified as social diseases, since their frequency and severity are determined by socio-economic and hygienic living conditions, the general, cultural level of the population, and the nature of feeding children.

**Students must:**

**Know:**

1. Prevalence of rickets, hypervitaminosis, spasmophilia.
2. Classification, etiology and pathogenesis of rickets, hypervitaminosis, spasmophilia.
3. Clinical signs of rickets, hypervitaminosis, spasmophilia.
4. Laboratory and instrumental signs of rickets, hypervitaminosis, spasmophilia.
5. Features of treatment of rickets, hypervitaminosis, spasmophilia.
6. Directions for the prevention of rickets, hypervitaminosis, spasmophilia.

**Be able:**

1. Carry out a clinical examination of the patient.
2. Carry out differential diagnosis.
3. Make and justify the diagnosis.
4. Interpret laboratory data.
5. Make a treatment plan.
6. Make a plan of preventive measures.

**Main questions:**

- Etiology and pathogenesis of rickets, hypervitaminosis, spasmophilia in children;
- Pathomorphological changes in rickets, hypervitaminosis, spasmophilia in children;
- Classification of rickets, hypervitaminosis, spasmophilia;
- Clinical criteria of rickets, hypervitaminosis, spasmophilia in children
- Diagnosis and differential diagnosis of rickets, hypervitaminosis, spasmophilia in children;
- Principles of treatment of rickets, hypervitaminosis, spasmophilia in children.
- Prevention of rickets, hypervitaminosis, spasmophilia in children.

**Lesson plan and organizational structure:**

N	Type of work	Time, min
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	60
3.	Purpose of the research plan	60
4.	Appointment of emergency therapy	60
5.	Purpose of treatment	60
6.	Features of prevention and rehabilitation	60
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

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Author: prof. Serhiy Popov

**Topic: Protein-energy deficiency**

**Duration:** 6 hours

**The purpose of the lesson:** to acquaint students with the etiology, pathogenesis, classification, clinical course, diagnosis and differential diagnosis of protein-energy deficiency, chronic nutritional disorders in children.

**Students must:**

**Know:**

1. Prevalence of protein-energy deficiency.
2. Classification, etiology and pathogenesis of protein-energy deficiency.
3. Clinical signs of protein-energy deficiency.
4. Laboratory and instrumental signs of protein-energy deficiency.
5. Features of treatment of protein-energy deficiency.
6. Directions for the prevention of protein-energy deficiency.

**Be able:**

1. Carry out a clinical examination of the patient.
2. Carry out differential diagnosis.
3. Make and justify the diagnosis.
4. Interpret laboratory data.
5. Make a treatment plan.
6. Make a plan of preventive measures.

**Main questions:**

- Etiology and pathogenesis of protein-energy deficiency;
- Pathomorphological changes in protein-energy deficiency;
- Classification of protein-energy deficiency;
- Clinical criteria of protein-energy deficiency in children
- Diagnosis and differential diagnosis of protein-energy deficiency in children;
- Principles of treatment of protein-energy deficiency in children.
- Prevention of protein-energy deficiency in children.

**Lesson plan and organizational structure:**

N	Type of work	Time, min
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	60
3.	Purpose of the research plan	60
4.	Appointment of emergency therapy	60
5.	Purpose of treatment	60
6.	Features of prevention and rehabilitation	60
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

**Recommended Books:**

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3 The European Society for Emergency Medicine <http://eusem.org>

4 The National Association of State EMS Officials <https://nasemsso.org/>

Author:

prof. Serhiy Popov

**Topic: Acute respiratory infections of the upper respiratory tract in children. Acute bronchitis in children.**

**Place of the class:** regional children's clinical hospital, children's polyclinic

**Duration:** 6 hours

**The purpose of the lesson:** to acquaint students with the etiology, pathogenesis, diagnosis and differential diagnosis, methods of treatment of acute respiratory infections of the upper respiratory tract and acute bronchitis in children.

**Students must:**

**know:**

- Determination of acute respiratory infections of the upper respiratory tract, bronchitis and bronchiolitis in children, risk factors, etiology.
- Modern classification and pathogenesis of acute respiratory infections of the upper respiratory tract, bronchitis in children.
- Clinical manifestations in early and older children.
- Methods of diagnosis of acute respiratory infections of the upper respiratory tract, bronchitis, depending on the form.
- Differential diagnosis of acute respiratory infections of the upper respiratory tract, bronchitis.
- Principles of treatment of acute respiratory infections of the upper respiratory tract, bronchitis depending on the age of the child, form, course and complications of the disease.
- Principles of treatment depending on the etiological agent.
- Indications for prescribing antibiotics.
- Rules for choosing an antibiotic.
- Rules for antibiotic therapy.
- Indications for prescribing antiviral therapy.
- Indications for the appointment of muco- and broncholytic therapy.
- Calculation of infusion therapy.
- Principles of respiratory therapy.
- Principles of physiotherapy.
- Principles of dispensation, rehabilitation measures and prevention.

**be able:**

1. Conduct a clinical examination of the patient (assess the condition, course of the disease, identify complications).
2. Carry out differential diagnosis.
3. Make and substantiate the diagnosis.
4. Interpret laboratory data.
5. Prescribe treatment to the patient.
6. Make a plan of rehabilitation measures.

**Main questions:**

- Etiology and pathogenesis of acute respiratory infections of the upper respiratory tract, bronchitis and bronchiolitis in children;
- Pathomorphological changes in acute respiratory infections of the upper respiratory tract, bronchitis and bronchiolitis in children;
- Classification of acute respiratory infections of the upper respiratory tract, bronchitis and bronchiolitis in children;
- Clinical criteria for acute respiratory infections of the upper respiratory tract, bronchitis and bronchiolitis in children
- Diagnosis and differential diagnosis of acute respiratory infections of the upper respiratory tract, bronchitis and bronchiolitis in children;
- Principles of treatment of acute respiratory infections of the upper respiratory tract, bronchitis and bronchiolitis in children.
- Prevention of acute respiratory infections of the upper respiratory tract, bronchitis and bronchiolitis in children.

**Lesson plan and organizational structure:**

N	Type of work	Time, min
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	60
3.	Purpose of the research plan	60
4.	Appointment of emergency therapy	60
5.	Purpose of treatment	60
6.	Features of prevention and rehabilitation	60
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

**Recommended Books:****Basic literature**

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Author:

prof. Serhiy Popov



**Topic: Pneumonia in children**

**Duration:** 10 hours

**Place of the class:** regional children's clinical hospital, children's polyclinic

**The purpose of the lesson:** to acquaint students with the etiology, pathogenesis, diagnosis and differential diagnosis, methods of treatment of acute pneumonia in children.

**Students must:**

**know:**

1. Definition of acute pneumonia in children, risk factors, etiology.
2. Modern classification and pathogenesis of acute pneumonia in children.
3. Clinical manifestations in early and older children.
4. Methods of diagnosing acute pneumonia depending on the form.
5. Differential diagnosis of acute pneumonia.
6. Principles of treatment of acute pneumonia depending on the age of the child, form, course and complications of the disease.
7. Principles of treatment depending on the etiological agent.
8. Indications for prescribing antibiotics.
9. Rules for choosing an antibiotic.
10. Rules for antibiotic therapy.
11. Indications for prescribing antiviral therapy.
12. Indications for the appointment of muco- and broncholytic therapy.
13. Pathogenetic therapy of neurotoxicosis, acute respiratory failure, cerebral edema, cardiorespiratory and obstructive syndromes in acute pneumonia.
14. Calculation of infusion therapy.
15. Principles of respiratory therapy.
16. Principles of physiotherapy.
17. Principles of dispensation, rehabilitation measures and prevention.

**be able to:**

1. Conduct a clinical examination of the patient (assess the condition, course of the disease, identify complications).
2. Carry out differential diagnosis.
3. Make and substantiate the diagnosis.
4. Interpret laboratory data.
5. Prescribe treatment to the patient.
6. Make a plan of rehabilitation measures.

**Main questions:**

- Etiology and pathogenesis of acute pneumonia in children;
- Pathomorphological changes in acute pneumonia in children;
- Classification of acute pneumonia in children;
- Clinical criteria of acute pneumonia in children in children
- Diagnosis and differentiation of acute pneumonia in children;
- Principles of treatment of acute pneumonia in children.
- Prevention of acute pneumonia in children.

**Lesson plan and organizational structure:**

1. Organizational measures 5 min.
2. Control and correction of input control of students' knowledge 25 min.
3. Curation of thematic patients 120 min.
4. Clinical examination of patients with the teacher 60 min.
5. Analysis and interpretation of additional research methods 60 min.
6. Differential diagnosis, substantiation of the diagnosis 60 min.
7. Drawing up a plan for additional examination and treatment 120 min.
8. Other types of work 60 min.
9. Solving situational problems, tests, working with computer programs 60 min.

10. Control of the final level of knowledge, analysis of goal achievement and tasks for the next lesson 30 min.

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

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- 4 The National Association of State EMS Officials <https://nasemsa.org/>

Author:

prof. Serhiy Popov

**Topic: Atopic dermatitis and allergic rhinitis in children. Urticaria in children. Quincke's edema**

**Place of the class:** regional children's clinical hospital, children's polyclinic

**Number of hours:** 8

**Purpose:** to be able to diagnose and prescribe appropriate therapy for sick children with atopic dermatitis, allergic rhinitis, urticaria, angioedema.

**Relevance of the topic:** Allergic diseases are one of the most common diseases that require advanced knowledge of diagnosis and treatment.

**Students must:**

**Know:**

1. Prevalence of atopic dermatitis, allergic rhinitis, urticaria, angioedema.
2. Classification, etiology and pathogenesis of atopic dermatitis, allergic rhinitis, urticaria, angioedema.
3. Clinical signs of atopic dermatitis, allergic rhinitis, urticaria, angioedema.
4. Laboratory and instrumental signs of atopic dermatitis, allergic rhinitis, urticaria, angioedema.
5. Features of treatment of atopic dermatitis, allergic rhinitis, urticaria, angioedema.
6. Directions for the prevention of atopic dermatitis, allergic rhinitis, urticaria, angioedema.

**Be able:**

1. Carry out a clinical examination of the patient.
2. Carry out differential diagnosis.
3. Make and justify the diagnosis.
4. Interpret laboratory data.
5. Make a treatment plan.
6. Make a plan of preventive measures.

**Main questions:**

- Etiology and pathogenesis of atopic dermatitis, allergic rhinitis, urticaria, angioedema;
- Pathomorphological changes in atopic dermatitis, allergic rhinitis, urticaria, angioedema;
- Classification of atopic dermatitis, allergic rhinitis, urticaria, angioedema;
- Clinical criteria of atopic dermatitis, allergic rhinitis, urticaria, angioedema
- Diagnosis and differential diagnosis of atopic dermatitis, allergic rhinitis, urticaria, angioedema;
- Principles of treatment of atopic dermatitis, allergic rhinitis, urticaria, angioedema.
- Prevention of atopic dermatitis, allergic rhinitis, urticaria, angioedema.

**Lesson plan and organizational structure:**

N	Type of work	Time, min
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	120
3.	Purpose of the research plan	60
4.	Appointment of emergency therapy	60
5.	Purpose of treatment	120
6.	Features of prevention and rehabilitation	60
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

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Author: prof. Serhiy Popov

Methodical recommendations  
Practical class of the discipline Pediatrics, 4th course  
222 "Medicine"

- **Topic: Bronchial asthma in children.**
- **Place of the class:** regional children's clinical hospital, children's polyclinic
- **Number of hours:** 8
- **Aim:** to be able to diagnose and prescribe appropriate therapy for children with bronchial asthma.
- **Relevance of the topic:** bronchial asthma is one of the most common diseases that requires advanced knowledge of diagnosis and treatment.
- **Students must:**
- **Know:**
  1. Prevalence of bronchial asthma in children.
  2. Classification, etiology and pathogenesis of bronchial asthma in children.
  3. Clinical signs of bronchial asthma in children.
  4. Laboratory and instrumental signs of bronchial asthma in children.
  5. Features of treatment of bronchial asthma in children.
  6. Directions for the prevention of bronchial asthma in children.

**Be able:**

1. Carry out a clinical examination of the patient.
2. Carry out differential diagnosis.
3. Make and justify the diagnosis.
4. Interpret laboratory data.
5. Make a treatment plan.
6. Make a plan of preventive measures.

**Main questions:**

1. Eosinophilic pulmonary infiltrate, clinic, diagnosis, treatment;
2. Stages of the pathogenesis of bronchial asthma in children;
3. Clinical and diagnostic criteria of bronchial asthma in children;
4. Strategy for control of bronchial asthma in children;
5. Criteria for achieving control of bronchial asthma in children;
6. Volume of basic therapy for the treatment of bronchial asthma in children;
7. Characteristics of emergency treatment of bronchial asthma in children;
8. A stepwise approach to the treatment of bronchial asthma in children;
9. Patient and parent education strategy to control bronchial asthma in children

**Lesson plan and organizational structure:**

N	Type of work	Time, min
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	120
3.	Purpose of the research plan	60
4.	Appointment of emergency therapy	60
5.	Purpose of treatment	120
6.	Features of prevention and rehabilitation	60
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

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- 2 American Academy of Pediatrics Policy (AAP Policy) Clinical Practice Guidelines <https://www.aap.org>
- 3 The European Society for Emergency Medicine <http://eusem.org>
- 4 The National Association of State EMS Officials <https://nase mso.org/>

Author:

prof. Serhiy Popov

**Topic. Congenital heart defects. Inflammatory and non-inflammatory heart diseases in children. Juvenile rheumatoid arthritis and reactive arthropathies in children.**

**Place of the class:** regional children's clinical hospital, children's polyclinic

**Number of hours:** 20

**The purpose of the lesson:** To acquaint students with the complex problem of modern clinical pediatrics, both medically and socially. Familiarize with AFO of the heart and blood vessels, etiology, classification, clinic of heart diseases, general symptoms, differential diagnosis, complications, conservative methods of treatment of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children.

**Students must:**

**know:**

1. Etiology, classification of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children.
2. Factors and transferred diseases resulting in congenital heart defects.
3. General symptoms of congenital heart disease, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children.
4. Diagnostic methods based on ECG and X-ray data.
5. Complications of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children.
6. Methods of treatment at the modern stage.
7. Acute and chronic heart failure.
8. Clinical signs of myocarditis, endocarditis, joint syndrome.
9. Differential diagnosis of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children.
10. Complications and prognosis of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children.
11. Methods of treatment of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children. at the current stage.

**be able:**

1. Assess the condition of the sick child depending on the course of the disease
2. Identify the main clinical manifestations of chronic cardiovascular insufficiency.
2. To evaluate ECG indicators, FCG and additional research methods.
3. Provide emergency care in case of cardiac arrest, acute left ventricular failure, right ventricular failure, fainting, shock, collapse.
4. Compile an algorithm of treatment actions depending on the stage of blood circulation disorder.
5. Draw up a plan for dispensary observation with congenital heart defects.
6. Assess the condition of a sick child with rheumatism.
7. Carry out the differential diagnosis algorithm.
8. To prescribe an algorithm of medical measures taking into account an individual approach to a sick child.
9. Provide emergency care for acute cardiovascular failure.
10. Make a plan for dispensary observation.

**Main questions:**

- Prevalence of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children.;
- Etiology and pathogenesis of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children;
- Pathomorphological changes in congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children;
- Classification of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children;
- Clinical criteria for congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children

- Diagnosis and differential diagnosis of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children;
- Principles of treatment of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children.
- Prevention of congenital heart defects, inflammatory and non-inflammatory heart diseases, juvenile rheumatoid arthritis and reactive arthropathy in children.

**Lesson plan and organizational structure:**

N	Type of work	Time, min
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	240
3.	Purpose of the research plan	240
4.	Appointment of emergency therapy	240
5.	Purpose of treatment	240
6.	Features of prevention and rehabilitation	180
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

**Recommended Books:**

**Basic literature**

1. Nelson Textbook of Pediatrics, 20th edition / Robert M. Kliegman, Bonita F. Stanton, Ninaa F. Schor [et al.] // London: Elsevier, 2016. - 3880 p.
2. Pediatrics: textbook / O. V. Tiazhka, T. V. Pochinok, A. M. Antoshkina etc. ; edited by O.V. Tiazhka. — 3-rd edition, reprint. — Vinnytsia : Nova Knyha, 2018. — 544 p
3. USMLE Step 2 CK: Pediatrics: Lecture Notes / Editors W.G. Cvetnic, E. Pino. — New York : Kaplan, 2019. — 281 p.

**Supporting literature**

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2. Nelson Textbook of Pediatrics, 2-Volume Set 21st Edition/ Robert M. Kliegman, Joseph St. Geme. Elsevier; 21st Edition, 2019. – 4264 p.
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- 4 The National Association of State EMS Officials <https://nasemso.org/>

Author:

prof. Serhiy Popov



**Lesson topic: Esophagus and stomach diseases in children.**

**Place of the class:** regional children's clinical hospital, children's polyclinic

**Number of hours:** 6

**The purpose of the lesson:** To acquaint students with the complex problem of modern clinical pediatrics, both medically and socially. Get acquainted with AFO of the gastrointestinal tract, etiology, classification, clinic of diseases, general symptoms, differential diagnosis, complications, treatment methods.

**Students should:**

**Know:**

1. Etiology, classification of diseases of the esophagus and stomach in children.
2. Factors and past conditions that cause diseases of the esophagus and stomach in children.
3. General symptoms of diseases of the esophagus and stomach in children.
4. Methods of diagnosing diseases of the esophagus and stomach in children.
5. Differential diagnosis of diseases of the esophagus and stomach in children
6. Methods of treatment at the modern stage of diseases of the esophagus and stomach in children
7. Complications and prognosis of diseases of the esophagus and stomach in children

**Be able:**

1. Assess the condition of a sick child depending on the course of diseases of the esophagus and stomach in children
2. To highlight the main clinical manifestations of diseases of the esophagus and stomach in children
3. To evaluate indicators of laboratory, instrumental methods of research of diseases of the esophagus and stomach in children
4. To carry out the algorithm of differential diagnosis of diseases of the esophagus and stomach in children
5. Provide emergency care in case of esophageal and stomach diseases in children
6. Compile an algorithm of therapeutic actions depending on diseases of the esophagus and stomach in children
7. Draw up a plan for dispensary observation of diseases of the esophagus and stomach in children.

**Main questions:**

- Etiology and pathogenesis of diseases of the esophagus and stomach in children;
- Pathomorphological changes in diseases of the esophagus and stomach in children;
- Classification of diseases of esophagus and stomach in children;
- Clinical criteria for diseases of the esophagus and stomach in children
- Diagnosis and differential diagnosis of diseases of the esophagus and stomach in children;
- Principles of treatment of diseases of the esophagus and stomach in children.
- Prevention of diseases of the esophagus and stomach in children.

**Lesson plan and organizational structure:**

N	Type of work	Time, min
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	60
3.	Purpose of the research plan	60
4.	Appointment of emergency therapy	60
5.	Purpose of treatment	60
6.	Features of prevention and rehabilitation	60
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

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- 4 The National Association of State EMS Officials <https://nasemsa.org/>

Author:

prof. Serhiy Popov

**Topic: Functional diseases of the intestines and biliary system in children.**

**Place of the class:** regional children's clinical hospital, children's polyclinic

**Number of hours:** 6

**The purpose of the lesson:** To acquaint students with the complex problem of modern clinical pediatrics, both medically and socially. Familiarize with AFO of the gastrointestinal tract, etiology, classification, clinic of diseases, general symptoms, differential diagnosis, complications, methods of treatment of functional diseases of the intestines and biliary system in children.

**Students should:**

**Know:**

1. Etiology, classification of functional diseases of the intestines and biliary system in children.
2. Factors and inherited conditions that cause functional diseases of the intestines and biliary system in children.
3. General symptoms of functional diseases of the intestines and biliary system in children.
4. Methods of diagnosis of functional diseases of intestines and biliary system in children.
5. Differential diagnosis of functional diseases of the intestines and biliary system in children
6. Methods of treatment of functional diseases of intestines and biliary system in children at the modern stage.
7. Complications and prognosis of functional diseases of intestines and biliary system in children.

**Be able:**

1. Assess the condition of a sick child depending on the course of functional diseases of the intestines and biliary system in children
2. To highlight the main clinical manifestations of functional diseases of the intestines and biliary system in children.
3. To evaluate indicators of laboratory, instrumental methods of research of functional diseases of intestines and biliary system in children
4. To carry out an algorithm of differential diagnosis of functional diseases of the intestines and biliary system in children.
5. To provide emergency care in case of functional diseases of the intestines and biliary system in children.
6. Compile an algorithm of therapeutic actions depending on functional diseases of the intestines and biliary system in children.
7. To draw up a plan of dispensary observation of functional diseases of intestines and biliary system in children.

**Main questions:**

- Etiology and pathogenesis of functional diseases of intestines and biliary system in children;
- Pathomorphological changes in functional diseases of the intestines and biliary system in children;
- Classification of functional diseases of intestines and biliary system in children;
- Clinical criteria of functional diseases of intestines and biliary system in children
- Diagnosis and differential diagnosis of functional diseases of the intestines and biliary system in children;
- Principles of treatment of functional diseases of intestines and biliary system in children.
- Prevention of functional diseases of the intestines and biliary system in children.

**Lesson plan and organizational structure:**

N	Type of work	Time, min
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	60
3.	Purpose of the research plan	60
4.	Appointment of emergency therapy	60
5.	Purpose of treatment	60
6.	Features of prevention and rehabilitation	60
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

**Recommended Books:**

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- 3 The European Society for Emergency Medicine <http://eusem.org>
- 4 The National Association of State EMS Officials <https://nasemsso.org/>

Author:

prof. Serhiy Popov

**Topic: Organic diseases of the intestines and biliary system in children.**

**Place of the class:** regional children's clinical hospital, children's polyclinic

**Number of hours:** 6

**The purpose of the lesson:** To acquaint students with the complex problem of modern clinical pediatrics, both medically and socially. Familiarize with AFO of the gastrointestinal tract, etiology, classification, clinic of diseases, general symptoms, differential diagnosis, complications, methods of treatment of organic diseases of the intestines and biliary system in children.

**Students should:**

**Know:**

1. Etiology, classification of organic diseases of intestines and biliary system in children.
2. Factors and inherited conditions that cause organic diseases of the intestines and biliary system in children.
3. General symptoms of organic diseases of the intestines and biliary system in children.
4. Methods of diagnosis of organic diseases of intestines and biliary system in children.
5. Differential diagnosis of organic diseases of the intestines and biliary system in children
6. Methods of treatment at the modern stage of organic diseases of the intestines and biliary system in children
7. Complications and prognosis of organic diseases of intestines and biliary system in children.

**Be able:**

1. Assess the condition of a sick child depending on the course of organic diseases of the intestines and biliary system in children
2. Identify the main clinical manifestations of organic diseases of the intestines and biliary system in children
3. To evaluate indicators of laboratory, instrumental methods of research of organic diseases of intestines and biliary system in children.
4. To carry out an algorithm of differential diagnosis of organic diseases of the intestines and biliary system in children
5. Compile an algorithm of therapeutic actions depending on organic diseases of the intestines and biliary system in children
6. Draw up a plan for dispensary observation of organic diseases of the intestines and biliary system in children

**Main questions:**

- Etiology and pathogenesis of organic diseases of intestines and biliary system in children;
- Pathomorphological changes in organic diseases of the intestines and biliary system in children;
- Classification of organic diseases of intestines and biliary system in children;
- Clinical criteria of organic diseases of intestines and biliary system in children
- Diagnosis and differential diagnosis of organic diseases of the intestines and biliary system in children;
- Principles of treatment of organic diseases of intestines and biliary system in children.
- Prevention of organic diseases of intestines and biliary system in children.

**Lesson plan and organizational structure:**

<b>N</b>	<b>Type of work</b>	<b>Time, min</b>
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	60
3.	Purpose of the research plan	60
4.	Appointment of emergency therapy	60
5.	Purpose of treatment	60
6.	Features of prevention and rehabilitation	60
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

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- 4 The National Association of State EMS Officials <https://nase mso.org/>

Author:

prof. Serhiy Popov

**Topic: Infections of the urinary system in children. Chronic kidney disease.**

**Place of the class:** regional children's clinical hospital, children's polyclinic

**Number of hours:** 8

**The purpose of the lesson:** To acquaint students with the complex problem of modern clinical pediatrics, both medically and socially. Get acquainted with the etiology, classification, clinic of patients with urinary system infections, chronic kidney disease in children, general symptoms, differential diagnosis, complications, treatment methods.

**Students should:**

**Know:**

1. Etiology, classification of urinary system infections, chronic kidney disease.
2. Factors and past conditions that cause infections of the urinary system, chronic kidney disease in children.
3. General symptoms of urinary system infections, chronic kidney disease in children.
4. Methods of diagnosis of infections of the urinary system, chronic kidney disease in children.
5. Differential diagnosis of infections of the urinary system, chronic kidney disease in children
6. Methods of treatment of infections of the urinary system, chronic kidney disease in children at the current stage.
7. Complications and prognosis of infections of the urinary system, chronic kidney disease in children.

**Be able:**

1. Assess the condition of a sick child depending on the course of infections of the urinary system, chronic kidney disease in children
2. To highlight the main clinical manifestations of infections of the urinary system, chronic kidney disease in children.
3. To evaluate indicators of laboratory, instrumental methods of research of infections of the urinary system, chronic kidney disease in children.
4. To carry out the algorithm of differential diagnosis of infections of the urinary system, chronic kidney disease in children.
5. Provide emergency care in case of urinary system infections, chronic kidney disease in children.
6. Compile an algorithm of treatment actions depending on infections of the urinary system, chronic kidney disease in children.
7. Draw up a plan for dispensary monitoring of infections of the urinary system, chronic kidney disease in children.

**Main questions:**

- Etiology and pathogenesis of urinary system infections, chronic kidney disease in children;
- Pathomorphological changes in infections of the urinary system, chronic kidney disease in children;
- Classification of infections of the urinary system, chronic kidney disease in children;
- Clinical criteria for infections of the urinary system, chronic kidney disease in children
- Diagnosis and differential diagnosis of infections of the urinary system, chronic kidney disease in children;
- Principles of treatment of infections of the urinary system, chronic kidney disease in children.
- Prevention of urinary system infections, chronic kidney disease in children.

**Lesson plan and organizational structure:**

<b>N</b>	<b>Type of work</b>	<b>Time, min</b>
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	120
3.	Purpose of the research plan	60
4.	Appointment of emergency therapy	60
5.	Purpose of treatment	120
6.	Features of prevention and rehabilitation	60
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

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Author:

prof. Serhiy Popov



Methodical recommendations  
Practical class of the discipline Pediatrics, 4th course  
222 "Medicine"

**Topic: Glomerulonephritis in children. Chronic kidney failure in children.**

**Place of the class:** regional children's clinical hospital, children's polyclinic

**Number of hours:** 8

**The purpose of the lesson:** To acquaint students with the acquired disease, the basis of which is immune inflammation and predominant damage to the glomeruli of the kidneys. With this disease, other structures of the kidney tissue, many organs and systems of the body are successively involved in the pathological process, almost all types of metabolism are disturbed.

**Students must:**

**Know:**

1. Prevalence of glomerulonephritis, chronic kidney failure in children.
2. Classification, etiology and pathogenesis of glomerulonephritis, chronic renal failure in children.
3. Clinical signs of glomerulonephritis, chronic kidney failure in children.
4. Laboratory and instrumental signs of glomerulonephritis, chronic kidney failure in children.
5. Features of treatment of glomerulonephritis, chronic kidney failure in children.
6. Directions for the prevention of glomerulonephritis, chronic kidney failure in children.

Be able:

1. Carry out a clinical examination of the patient.
2. Carry out differential diagnosis.
3. Make and justify the diagnosis.
4. Interpret laboratory data.
5. Make a treatment plan.
6. Make a plan of preventive measures.

**Main questions:**

- Etiology and pathogenesis of glomerulonephritis, chronic renal failure in children;
- Pathomorphological changes in glomerulonephritis, chronic renal failure in children;
- Classification of glomerulonephritis, chronic kidney failure in children;
- Clinical criteria of glomerulonephritis, chronic kidney failure in children
- Diagnosis and differential diagnosis of glomerulonephritis, chronic kidney failure in children;
- Principles of treatment of glomerulonephritis, chronic kidney failure in children.
- Prevention of glomerulonephritis, chronic kidney failure in children.

**Lesson plan and organizational structure:**

N	Type of work	Time, min
1.	Control of basic knowledge	30
2.	Definition of clinical and diagnostic criteria for diseases	120
3.	Purpose of the research plan	60
4.	Appointment of emergency therapy	60
5.	Purpose of treatment	120
6.	Features of prevention and rehabilitation	60
7.	Summary of the lesson	30

**Illustrative material:** contingent of supervised children, research results, slides.

**Types and forms of control:** evaluation of the basic level of knowledge in the form of interviews, the ability to use theoretical knowledge in practice.

**Tasks for independent preparation:** work with thematic literature in the library, discussions, exchange of experience.

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