

MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION

MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC

Interstate Educational Organization of Higher Education Kyrgyz-Russian Slavic  
University named after the first President of the Russian Federation B.N.Yeltsin

School of Medicine

ENDORSED BY

Dean of the Faculty  
Abilova S.S.



### OTORHINOLARYNGOLOGY

Course Outline (Module)

Assigned to

Academic Curriculum 31050150\_15\_13gm.pli.xml  
31.05.01. General Medicine

Mode of Study **Intramural**  
Total Credit Value 3 ZET credit points

Course Hours  
including: 108  
in class learning: 64  
individual work: 43,7

Scope of Testing Semesters:  
exam  
credits 9

Semester (<course>, <semester on course>)	9 (5.1)		Total	
	EP	WPS	EP	WPS
Weeks	18			
Type of classes	EP	WPS	EP	WPS
Lectures	16	16	16	16
Practical	48	48	48	48
Including	4	4	4	4
Total aud.	64	64	64	64
Contact	64,3	64,3	64,3	64,3
Self-study	43,7	43,7	43,7	43,7
Total	108	108	108	108



**The course outline endorsed for the academic year**

Chairman of the educational and methodological board

\_\_\_\_\_ 2026 year.

The course outline has been revised, considered and endorsed for implementation in 2026-2027 academic year at the staff meeting of otorhinolaryngology department

Record of \_\_\_\_\_ 2026 year № \_\_\_\_\_

The head of department Izaeva T.A.

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**The course outline endorsed for the academic year**

Chairman of the educational and methodological board

\_\_\_\_\_ 2027 year.

The course outline has been revised, considered and endorsed for implementation in 2027-2028 academic year at the staff meeting of otorhinolaryngology department

Record of \_\_\_\_\_ 2027 year № \_\_\_\_\_

The head of department Izaeva T.A.

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**The course outline endorsed for the academic year**

Chairman of the educational and methodological board

\_\_\_\_\_ 2028 year.

The course outline has been revised, considered and endorsed for implementation in 2027-2028 academic year at the staff meeting of otorhinolaryngology department

Record of \_\_\_\_\_ 2028 year № \_\_\_\_\_

The head of department Izaeva T.A.

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**The course outline endorsed for the academic year**

Chairman of the educational and methodological board

\_\_\_\_\_ 2029 year.

The course outline has been revised, considered and endorsed for implementation in 2027-2028 academic year at the staff meeting of otorhinolaryngology department

Record of \_\_\_\_\_ 2029 year № \_\_\_\_\_

The head of department Izaeva T.A.

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### 1. DISCIPLINE DEVELOPMENT GOALS

1.1	Deepening of basic knowledge and the formation of systemic knowledge structure of ENT organs, etiology, pathogenesis, clinic of ENT diseases and their relationship with other diseases of the body, as well as treatment with using modern methods of treatment, to acquaint with the principles and methods of dispensary work, noting the importance of their timely identification and rehabilitation.
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### 2. PLACE OF THE COURSE IN THE EDUCATIONAL PROGRAM

Educational Program Units:	B1.B
<b>2.1</b>	<b>Requirements for the preliminary training</b>
2.1.1	Histology, embryology, cytology
2.1.2	Biology
2.1.3	Latin language
2.1.4	Chemistry
2.1.5	Microbiology, virology
2.1.6	Pathophysiology, clinical pathophysiology
2.1.7	Neurology, medical genetics, neurosurgery
2.1.8	Faculty Therapy
2.1.9	Faculty Surgery
2.1.10	Pharmacology
<b>2.2</b>	<b>Disciplines and practices for which the mastery this discipline (module) is necessary as previous:</b>
2.2.1	Hospital Therapy
2.2.2	Hospital Surgery
2.2.3	Infectious diseases
2.2.4	Clinical Pharmacology
2.2.5	Clinical Biochemistry
2.2.6	Pediatrics
2.2.7	Ophthalmology
2.2.8	Oncology, radiation therapy
2.2.9	Stomatology
2.2.10	Sectional course
2.2.11	Polyclinic Therapy

**3. COMPETENCIES OF THE TEACHER, FORMED AS THE RESULT OF DISCIPLINE (MODULE) DEVELOPMENT****PC-6 Ability to determine the patient's underlying pathological conditions, symptoms, syndromes diseases, nosological forms in accordance with the International Statistical Classification of Diseases and health problems, X revision**

<b>Know:</b>	
Level 1	Mechanism of functional changes on the part of organs with different methods of investigation
Level 2	Essential medicines used in the treatment of ENT diseases
Level 3	Differential diagnosis of similar nosological forms of ENT diseases
<b>Be able to:</b>	
Level 1	Describe changes from ENT organs with different methods of investigation
Level 2	Organize the right treatment tactics in order to improve the results of treatment of ENT diseases
Level 3	Conduct an interpretation of laboratory and instrumental research methods for ENT diseases
<b>Own:</b>	
Level 1	Skills for describing general pathological changes in the body and from ENT organs in patients with diseases of ENT organs
Level 2	Skills for interpreting objective examination data with laboratory and instrumental data Methods of research in patients with diseases of ENT organs and therapeutic profile
Level 3	Information on the course of the disease, depending on the stage of the disease and predicting further treatment of patients
<b>PC-8: ability to determine the tactics of managing patients with various nosological forms</b>	
<b>Know:</b>	
Level 1	etiology, pathogenesis, clinic and methods of examining ENT diseases;
Level 2	differential diagnosis of various nosological forms of ENT diseases
Level 3	modern conservative and surgical methods of treatment of ENT diseases;
<b>Be able to:</b>	
Level 1	to collect anamnesis
Level 2	to conduct an examination of ENT organs;
Level 3	determine the stage of nosological form of ENT disease
<b>Own:</b>	

Level 1	interpretation of the results of laboratory and instrumental survey methods;
Level 2	algorithms for treatment of ENT diseases;
Level 3	methods of conservative and surgical treatment of ENT diseases.
<b>PK-10: readiness to provide medical care for sudden acute illnesses, conditions, exacerbation chronic diseases, not accompanied by a threat to the life of the patient and not requiring an emergency medical care.</b>	
<b>Know:</b>	
Level 1	etiology, pathogenesis, clinic and methods for the study of acute and exacerbation of chronic inflammatory diseases of the
Level 2	differential diagnosis between acute and exacerbation of chronic ENT diseases;
Level 3	methods of providing an ENT-aid in acute and exacerbation of chronic ENT diseases.
<b>Be able to:</b>	
Level 1	to collect anamnesis
Level 2	to conduct an examination of ENT organs
Level 3	define a nosological form
<b>Own:</b>	
Level 1	interpretation of the results of laboratory and instrumental survey methods;
Level 2	algorithms for treatment of ENT diseases;
Level 3	methods of medical care in acute and exacerbation of chronic ENT diseases.

**As a result of mastering the discipline, the learner has to:**

<b>3.1</b>	<b>Know:</b>
3.1.1	anatomy, physiology and methods of examining ENT organs
3.1.2	etiology, pathogenesis, clinic and methods of examining ENT diseases
3.1.3	differential diagnosis and treatment of ENT diseases
3.1.4	structure of the modern healthcare system of the Russian Federation
3.1.5	activity of bodies and institutions of the system of protection of childhood and maternity (ODM)
<b>3.2</b>	<b>Be able to:</b>
3.2.1	to collect anamnesis
3.2.2	conduct a survey of the patient and his relatives
3.2.3	conduct a physical examination of the patient
3.2.4	inspect the ENT organs
3.2.5	refer to laboratory and instrumental research methods and advice to other specialists
3.2.6	interpret the survey results
3.2.7	make a preliminary diagnosis;
3.2.8	Plan an additional survey plan to clarify the diagnosis;

3.2.9	substantiate the clinical diagnosis.
<b>3.3</b>	<b>Own:</b>
3.3.1	methods of general clinical examination and ENT organs of the patient
3.3.2	interpretation of the results of laboratory and instrumental research methods,
3.3.3	the algorithm for setting a detailed clinical diagnosis and determining the tactics of further treatment sick

#### 4. STRUCTURE AND CONTENT OF DISCIPLINE (MODULE)

Lesson code	Name of sections and topics/ type of occupation	Semester/ Course	Hours	Competencies	Literature	Interact	Notes
	<b>Section 1. Anatomy, physiology and methods of examining ENT organs</b>						
1.1	Introduction to otorhinolaryngology, content, tasks and place among other medical history and development of domestic otorhinolaryngology. Method and technique of endoscopic studies ENT organs. /Lec/	9	2	PC-6	L.1.1 L.2.1 L.2.5	0	
1.2	Introduction to otorhinolaryngology, content, tasks and place among other branches of medical knowledge. History and ways of development home otorhinolaryngology. Methods and technique of endoscopic study of ENT-organs /Pr/	9	4	PC-6	L.1.1 L.2.1 L.2.5	0	
1.3	Introduction to otorhinolaryngology and methods of examining ENT organs /Iw/	9	3	PC-6	L.1.1 L.2.1 L.2.5	0	
1.4	Clinical anatomy, physiology and methods for the study of auditory and vestibular analyzer. /Lec/	9	2	PC-6	L.1.1 L.2.3 L.2.5	0	
1.5	Clinical anatomy, physiology and methods of examining external and middle ear. Features of the structure and physiology in children /Iw/	9	2	PC-6	L.1.1 L.2.1 L.2.3 L.2.5	0	
1.6	Clinical anatomy, physiology and methods of examining external and middle ear /Pr/	9	4	PC-6	L.1.1 L.2.3 L.2.5	0	Set tools: reflector, tuning forks, ear funnels.

1.7	Clinical anatomy, physiology and methods for the study of auditory and vestibular analyzers. /Pr/	9	4	PC-6	L.1.1 L.2.1 L.2.3 L.2.5	0	Role-playing game: doctor-patient. Set tools: audiometer, tuning
1.8	Clinical anatomy and physiology nose, sinuses and pharynx. Methods of examination. Features of the structure and physiology in children /Pr/	9	4	PC-6	L.1.1 L.2.3 L.2.5	0	Set tools: nasal mirrors, spatulas, nasopharyngeal mirror, reflector.
1.9	Clinical anatomy, physiology and Methods of examination larynx, trachea, bronchus and esophagus. Features of the structure and physiology in children /Pr/	9	4	PC-6	L.1.1 L.2.3 L.2.5	0	Set tools: laryngeal mirrors, reflector, spatula, laryngoscopes
1.10	Clinical anatomy, physiology and methods of examination auditory and vestibular analyzers. Features of the structure and physiology in children /Iw/	9	3	PC-6	L.1.1 L.2.3 L.2.5	0	
1.11	Clinical anatomy, physiology and methods of research of larynx, trachea, bronchi and esophagus. Features of the structure and physiology in children /Iw/	9	2	PC-6	L.1.1 L.2.3 L.2.5	0	
1.12	Clinical anatomy and physiology the nose, paranasal sinuses and pharynx. Their research methods. Features of the structure and physiology in children /Iw/	9	2	PC-6	L.1.1 L.2.3 L.2.5	0	
	<b>Section 2. Diseases of the ear</b>						
2.1	Diseases of the outer ear: the outer otitis (furuncle, diffuse inflammation the external auditory meatus), sulfuric tube. Acute purulent inflammation of the middle ear. Mastoiditis, it's neck form. /Lec/	9	1	PC-6 PC-8	L.1.1 L.2.3 L.2.2 L.2.5	0	
2.2	Ear disease: chronic ear infections (meso - and attic disease). Labyrinthitis. Peculiarities of the children/Lec/	9	2	PC-6 PC-8	L.1.1 L.2.2 L.2.5	0	

2.3	Not purulent diseases ear: effusion, adhesive otitis media, otosclerosis, Meniere's disease, sensorineural hearing loss. Features of the structure and physiology in children Improving hearing operation. /Lec/	9	2	PC-6 PC-8	L.1.1 L.2.2 L.2.5	0	
2.4	Tumors of the ear. Emergency care in otia. Features in children /Lec/	9	1	PC-6 PC-8	L.1.1 L.2.2 L.2.3 L.2.5	0	
2.5	Diseases of the outer ear: the outer otitis (furuncle, diffuse inflammation the external auditory meatus), sulfuric tube. Acute purulent inflammation of the middle ear. Mastoiditis, it's neck form. /Pr/	9	4	PC-6 PC-8 PC-10	L.1.1 L.2.3 L.2.5	0	roleplay doctor-patient
2.6	Ear disease: chronic ear infections (meso - and attic disease). Labyrinthitis. Peculiarities of the children /Pr/	9	4	PC-6 PC-8 PC-10	L.1.1 L.2.3 L.2.5	0	
2.7	Otogenic intracranial complications. Features of the course have children. /Pr/	9	2	PC-6 PC-8 PC-10	L.1.1 L.2.3 L.2.5	0	
2.8	Not purulent diseases ear: effusion, adhesive otitis media, otosclerosis, Meniere's disease, sensorineural hearing loss. Features of the course have children. Improving hearing operation. /Pr/	9	3	PC-6 PC-8 PC-10	L.1.1 L.2.2 L.2.5	0	Roleplay doctor-patient
2.9	Tumors of the ear. Features in children. /Pr/	9	3	PC-6 PC-8 PC-10	L.1.1 L.2.2 L.2.4 L.2.5	0	
2.10	Emergency care in otia. /Pr/	9	2	PC-6 PC-8	L.1.1 L.2.1 L.2.5	0	
2.11	Diseases of the outer ear: the Outer otitis (furuncle, diffuse Inflammation the external Auditory meatus), sulfuric tube. Acute purulent inflammation of the middle ear. Mastoiditis, it's neck form. Peculiarities of the children. /Iw/	9	2	PC-6 PC-8 PC-10	L.1.1 L.2.1 L.2.3 L.2.5	0	

2.12	Ear disease: chronic ear infections (meso- and attic disease). Labyrinthitis. Peculiarities of the children./Iw/	9	2	PC-6 PC-8	L.1.1 L.2.2 L.2.5	0	
2.13	Otogenic intracranial complications. Features of the course have children. /Iw/	9	2	PC-6 PC-8	L.1.1 L.2.2 L.2.3 L.2.5	0	
2.14	Not purulent diseases ear: effusion, adhesive otitis media, otosclerosis, Meniere's disease, sensorineural hearing loss. Features of the course have children./Iw/	9	2	PC-6 PC-8	L.1.1 L.2.2 L.2.3 L.2.5	0	
2.15	Tumors of the ear. Features in children./Iw/	9	2	PC-6 PC-8	L.1.1 L.2.2 L.2.3 L.2.5	0	
2.16	Emergency care in otiatra. Peculiarities of the children./Iw/	9	2	PC-6 PC-8	L.1.1 L.2.3 L.2.5	0	
	<b>Section 3. Diseases of the upper respiratory tract</b>						
3.1	Diseases of the pharynx: acute and chronic pharyngitis, the faringomicoza, diphtheria of the pharynx, peritonsillar abscess, acute and chronic tonsillitis, hypertrophy palatal and pharyngeal the tonsils. Features of the course have children /Lec/	9	2	PC-6 PC-8	L.1.1 L.2.4 L.2.5	0	
3.2	Diseases of the larynx: acute and chronic laryngitis, acute stenosing laryngotracheitis, swelling of the larynx, diphtheria of the larynx. Paresis and paralysis of the larynx, acute and chronic stenosis. Tracheostomy. Tumors and infectious granulomas of the upper of the respiratory tract. Features current /Lec/	9	2	PC-6 PC-8	L.1.1 L.2.3 L.2.5	0	
3.3	Diseases of the nose: the curvature the nasal septum, furuncle of nose, acute and chronic rhinitis, acute and chronic rhinosinusitis. Rhinogenic intracranial complications. Features of the course have children. /Lec/	9	2	PC-6 PC-8	L.1.1 L.2.3 L.2.5	0	

3.4	Trauma, foreign body upper of the respiratory tract. Bleeding from Of ENT- organs, urgent help. Types of medical examination, professional selection and professional advice in otorhinolaryng ology. Especially in childhood. /Lec/	9	1	PC-6 PC-8	L.1.1 L.2.2 L.2.5	0	
3.5	Tumors and infectious granulomas the upper respiratory tract. Peculiarities of the children. /Lec/	9	1	PC-6 PC-8	L.1.1 L.2.3 L.2.5	0	
3.6	Diseases of the pharynx: acute and chronic pharyngitis, the faringomicoza, diphtheria of the pharynx, peritonsillar abscess, acute and chronic tonsillitis, hypertrophy palatal and pharyngeal the tonsils. Features of the course have children. /Lec/	9	3	PC-6 PC-8 PC-10	L.1.1 L.2.4 L.2.5	0	Roleplay doctor-patient
3.7	Diseases of the larynx: acute and chronic laryngitis, acute stenosing laryngotracheitis, swelling of the larynx, diphtheria of the larynx. Paresis and paralysis of the larynx, acute and chronic stenosis. Tracheostomy. Tumors and infectious granulomas of the upper of the respiratory tract. Features current /Pr/	9	3	PC-6 PC-8 PC-10	L.1.1 L.2.3 L.2.5	0	
3.8	Diseases of the nose: the curvature the nasal septum, furuncle of nose, acute and chronic rhinitis, acute and chronic rhinosinusitis. Rhinogenic intracranial complications. Features of the course have children. /Pr/	9	3	PC-6 PC-8 PC-10	L.1.1 L.2.3 L.2.5	0	
3.9	Trauma, foreign body upper of the respiratory tract. Bleeding from Of ENT-organs, urgent help. Types of medical examination, Professional selection and Professional advice in otorhinolaryngology./Pr/	9	2	PC-6 PC-8	L.1.1 L.2.3 L.2.5	0	
3.10	Tumors and infectious granulomas the upper respiratory tract. Peculiarities of the children. /Pr/	9	2	PC-6 PC-8 PC-10	L.1.1 L.2.3 L.2.5	0	

3.11	Clinic, MLEC. Curation patients /Pr/	9	3	PC-6 PC-8	L.1.1 L.2.3 L.2.4 L.2.5	0	
3.12	Diseases of the pharynx: acute and chronic pharyngitis, the faringomicoza, diphtheria of the pharynx, peritonsillar abscess, acute and chronic tonsillitis, hypertrophy palatal and pharyngeal the tonsils. Features of the course have children. /Iw/	9	2	PC-6 PC-8	L.1.1 L.2.4 L.2.5	0	
3.13	Diseases of the larynx: acute and chronic laryngitis, acute stenosing laryngotracheitis, swelling of the larynx, diphtheria of the larynx. Paresis and paralysis of the larynx, acute and chronic stenosis. Tracheostomy. Tumors and infectious granulomas of the upper of the respiratory tract. Features current /Iw/	9	2	PC-6 PC-8	L.1.1 L.2.3 L.2.5	0	
3.14	Diseases of the nose: the curvature the nasal septum, furuncle of nose, acute and chronic rhinitis, acute and chronic rhinosinusitis. Rhinogenic intracranial complications. Features of the course have children. /Iw/	9	3	PC-6 PC-8	L.1.1 L.2.3 L.2.5	0	
3.15	Trauma, foreign body upper of the respiratory tract. Bleeding from Of ENT-organs, urgenthelph. Types of medical examination, Professional selection and Professional advice in otorhinolaryngology./Pr/	9	2	PC-6 PC-8	L.1.1 L.2.3 L.2.5	0	
3.16	Tumors and infectious granulomas upper respiratory ways. Features of the course have children. /Iw/	9	2	PC-6 PC-8	L.1.1 L.2.1 L.2.5	0	
3.17	Clinic, MLEC. Curation patients /Iw/	9	2	PC-6 PC-8	L.1.1 L.2.3 L.2.5	0	
3.18	Test	9	0	PC-6		0	

## 5. Assessment fund

### 5.1. Test questions and assignments

1. Anatomical-topographic relations of the nasal cavity with the surrounding organs
2. Which anatomical formations are located on the lateral wall of the nasal cavity?
3. What nasal turbinates are in the nasal cavity?
4. What nasal passages are distinguished in the nasal cavity?
5. What opens into the upper nasal passage?
6. What opens into the middle nasal passage?
7. What opens into the lower nasal passage?
8. What paranasal sinuses open into the nasal cavity?
9. What anatomical formations make up the nasal septum?
10. Blood supply to the nasal cavity.
11. List the methods of research of the nose and its paranasal sinuses.
12. List the sections of the pharynx.
13. Lymphopharyngeal ring.
14. Blood supply to the pharynx.
15. Innervation of the pharynx.
16. Regional lymphatic nodes of the pharynx.
17. Does the lymphopharyngeal ring participate in the development of immunity?
18. Can hearing decrease with adenoidal lesions?
19. Muscles of the pharynx.
20. The anterior wall of the pharynx.
21. Methods of research of the pharynx.
22. Additional methods of pharyngeal research.
23. Clinical topography of the larynx.
24. Skeleton of the larynx.
25. The main ligaments of the larynx.
26. External muscles of the larynx.
27. The internal muscles of the larynx.
28. Departments of the larynx.
29. Where is the conical bunch?
30. Innervation of the larynx.
31. Physiology of the larynx.
32. Methods of research of the larynx. Their difference in the study of the larynx in adults and children?
33. Laryngoscopic picture.
34. Blood supply to the larynx.
35. Which parts of the outer ear?
36. Topography of external auditory canal.
37. What departments does the middle ear consist of?
38. What are the walls of the tympanum bordered on?
39. List the main elements of the tympanic membrane.
40. Name the auditory ossicles and muscles of the middle ear.
41. List the types of mastoid processes and groups of cells.
42. What is the middle ear formed?
43. What are the elements of the snail?
44. Name the main cells and elements of the organ of Corti.
45. Identify the main links of the conducting paths of the auditory analyzer.
46. Name the basic theory of hearing.
47. Describe the scheme of the auditory passport.

48. What kinds of audiometry do you know?
49. Anatomical formations that make up the inner ear.
50. Peri- and endolymphatic system of the inner ear.
51. Departments of the vestibular analyzer.
52. The structure of the peripheral receptor of the vestibular analyzer in semicircular canals.
53. The structure of the peripheral receptor of the vestibular analyzer in the sacs of the vestibule.
54. The mechanism of the occurrence of vestibular stimulation in the sacs of the vestibule. An adequate stimulus.
55. The mechanism of the occurrence of vestibular stimulation in semicircular canals. An adequate stimulus.
56. Ewald's experience and his laws.
57. Characteristics of the labyrinthine nystagmus.
58. Reaction of the body to vestibular stimuli.
59. Methods for studying the vestibular analyzer.
60. Describe the technique of anterior rhinoscopy and a normal rhinoscopic picture in the first position.
61. Describe the technique of a rhinoscopy and the normal rhinoscopic picture in the second position.
62. Describe the condition of the normal nasal mucosa.
63. Describe the normal rhinoscopic picture.
64. Describe the technique of aspiration of the sinus to be separated from the paranasal sinuses.
65. About inflammation of which paranasal sinuses it is possible to think, if at a rhinoscopy in the middle nasal passage found a strip of pus?
66. On the inflammation of which sinuses should be thought, if pus flows into the posterior parts of the nose and the nasopharynx?
67. What causes the curvature of the nasal septum?
68. Describe the procedure for the study of the olfactory function of the nose.
69. Describe the technique of palpation of the anterior paranasal sinuses.
70. About an inflammation of a which paranasal sinus can be assumed, if at a forward rhinoscope is found out a strip of pus in the middle nasal passage on the right, and on the survey radiograph there is a darkening of the right frontal sinus?
71. Inflammation of which sinus can be assumed if with a forward rhinoscopy a strip of pus is found on the left and on a review radiograph a homogeneous darkening of the left maxillary sinus?
72. The main functions of palatine tonsils.
73. Physiological barriers of palatine tonsils.
74. Which anatomical formations limit the entrance to the middle section of the pharynx?
75. List the layers of the posterior pharyngeal wall.
76. Main functions of the pharynx.
77. Which anatomical formations are visible in posterior rhinoscopy?
78. Which anatomical formations are visible in hypopharyngoscopy?
79. Methods of research of the nasopharynx.
80. What functions are impaired in hypertrophy of the nasopharyngeal tonsil?
81. Methods used in the study of the lower pharynx.
82. Where is the pharyngeal mouth of the auditory tube located?
83. What nerves innervate the pharynx?
84. Name the paired and unpaired cartilages of the larynx.
85. List the anatomical formations that belong to the upper (vestibular) section of the larynx.
86. List the anatomical formations related to the upper resonator.
87. Name the muscle that widens the vocal cavity and muscle which plays a role in the process of voice formation. From what nerve do they get motor innervation?
88. Name the muscles that narrow the vocal cavity. From what nerve do they get motor innervation? Does the vocal function suffer in the unilateral paralysis of this nerve?
89. What function of the larynx is disturbed by paralysis of the anterior cricothyroid muscle?
90. What diseases should be excluded in the neurogenic paralysis of the larynx on the left?
91. What function of the larynx is disturbed by bilateral paralysis of the upper laryngeal nerve and what is the bilateral paralysis of recurrent?
92. Features of the structure of the lining space in children.
93. Localization of reflexogenic zones of the larynx.
94. Blood supply to the larynx.
95. What ligament is the gap between the thyroid and the cricoid cartilage? List the processes arytenoid cartilage?
96. At the patient at inspection the presence of a furuncle on the bottom wall of an acoustical passage is revealed. What kind of complication is possible, given the topography, given the localization of the lesion?
97. How to characterize the state of the tympanic membrane, if a shortening of the handle is detected with otoscopy, and the appearance of a short process of the malleus, the tension of the anterior and posterior folds?
98. Causes of acute otitis media in children. Ways of infection in the middle ear.
99. What changes in the tympanic cavity occur with acute purulent otitis media?
100. How many periods are distinguished during acute purulent otitis media? What is the clinical characteristic?
101. What is the treatment of acute otitis media depending on the period of the disease?
102. What are the common and local signs of mastoiditis?
103. How to distinguish mastoiditis from the furuncle of the external auditory canal and lymphadenitis?
104. What are the indications for mastoiditis surgery?
105. What clinical forms do chronic ovulatory otitis share?
106. What is the nature of the perforation of the tympanic membrane with meso- and epitympanitis?

107. What is cholesteatoma?
108. Condition of auditory function in chronic purulent otitis media?
109. The basic principles of treatment of chronic purulent otitis media.
110. Pathoanatomical and pathophysiological classification of labyrinthitis.
111. The main diagnostic signs of the violation of the vestibular function in labyrinthitis.
112. Characteristic signs of acute inflammation of the pharyngeal mucosa (acute pharyngitis).
113. What are the different forms of chronic inflammation of the pharynx (chronic pharyngitis)?
114. Treatment of acute and chronic pharyngitis in children.
115. Clinical manifestations of angina.
116. Treatment of angina.
117. Signs of chronic inflammation of the tonsils (chronic tonsillitis).
118. Classification of chronic tonsillitis.
119. What is chronic tonsillitis with associated disease?
120. What are the conservative methods of treatment of chronic tonsillitis?
121. Indications for tonsillectomy.
122. What are the local and general complications of angina and chronic tonsillitis?
123. Leading symptoms of laryngitis.
124. Changes in the larynx with acute laryngitis.
125. The main medical measures with laryngitis.
126. Changes in the larynx in chronic laryngitis.
127. Forms of chronic laryngitis.
128. Treatment of chronic laryngitis.
129. Clinical manifestations of foreign bodies of the larynx.
130. What are the symptoms of foreign bodies of the nasal cavity?
131. Complaints with foreign bodies of the trachea and bronchi.
132. Data from objective research on foreign bodies of the trachea and bronchi.
133. Results of X-ray examination of foreign bodies of bronchi.
134. Methods for removing foreign bodies from the respiratory tract and esophagus.
135. Complications associated with the aspiration of foreign bodies in the respiratory tract.
136. What are the complications associated with foreign bodies of the esophagus?
137. Stages of an acute cold.
138. What are the methods of treating children with an acute cold?
139. Forms of chronic rhinitis and their rhinoscopic characteristics.
140. What methods are used to treat simple and hyperplastic rhinitis?
141. What kind of treatment is used for chronic rhinitis?
142. Main clinical signs of vasomotor rhinitis.
143. Methods of treatment of vasomotor rhinitis.
144. Symptoms of acute inflammation of the maxillary sinuses.
145. Methods of treatment of acute sinusitis.
146. Symptoms of acute inflammation of the frontal sinuses.
147. Symptoms of acute ethmoiditis.
148. Symptoms of acute sphenoiditis.
149. What treatment methods are used for acute sinusitis?
150. What is the rhinoscopy picture for chronic sinusitis?
151. What are the methods of treating chronic sinusitis?
152. What complications are possible in inflammation of the paranasal sinuses?
153. What is the etiology of stenosing lesions of the larynx?
154. At what age do subchordal laryngitis and stenosing laryngotraheobronchitis occur most often?
155. Stages and symptoms of acute stenosis of the larynx.
156. What is characterized by subchordal laryngitis?
157. Clinical manifestations of stenosing laryngotraheobronchitis.
158. What should be done with a fit of suffocation in the case of subchordal laryngitis and with stenosing laryngotraheobronchitis?
159. Indications and features of tracheostomy for acute stenosis of the larynx.
160. What are the causes of nasal bleeding in children?
161. Which parts of the nasal cavity most often cause bleeding?
162. Methods of stopping nasal bleeding.
163. Characteristics of the clinical course stages of the esophagus disease (burn).
164. First aid for burns of the esophagus with chemicals.
165. What are the methods of complex medicament therapy of the esophagus burn disease?
166. What pathological changes in the organ of hearing occur with otosclerosis?
167. How is the diagnosis of otosclerosis established?
168. What kind of treatment is used for otosclerosis?
169. What can cause cochlear neuritis?
170. What clinical manifestations are characteristic for cochlear neuritis?
171. What are the symptoms of functional hearing loss in patients with cochlear neuritis?
172. What medications are used for cochlear neuritis?
173. What is the essence of the changes in the labyrinth in Meniere's disease?
174. What is typical for Meniere's disease clinic?
175. What is used to treat Meniere's disease?
176. Technique of anterior and posterior tamponade of the nasal cavity.

177. Injuries to ENT organs in children (types, characteristics, symptoms, treatment).
178. What does the pain in the ear, accompanied by a decrease in hearing, indicate?
179. At the patient at inspection the sclerotic type of a mastoid process is revealed, what process in the ear is this testimony?
180. About what it is necessary to think at revealing at the child of thoracic morbidity at pressure on a tragus?
181. In the process of inflammation of the middle ear nausea, unsteadiness of the gait and deterioration of the hearing were developed. About what do these symptoms show?
182. A child of 11 months of age on the background of acute inflammation of the middle ear had a painful swelling above the ear canal. Which group of cells of the mastoid process is involved in inflammation?
183. In inflammation of the middle ear an asymmetry is appeared in the form of lowering the angle of the mouth, smoothing nasolabial folds, non-closure of the eye gap on the diseased side. What complication should we think about?
184. Patient has hearing loss in acumetry: a positive Rinne was detected. Weber in a healthy way, Schwabach shortened, mostly high-tonal hearing loss. What kind of damage to the organ of hearing should we think?
185. At audiometric examination the aerial and bone conduction of sounds with prevalence of air. What kind of deafness does the research data say?
186. The patient with inflammatory damage to the inner ear developed symptoms of intracranial complications. On the side of what cranial fossa should we expect it given the anatomical preformed connections of the inner ear?
187. List the methods for examining the vestibular analyzer.
188. Describe the symptoms of a fistula sample with compression, at decompression.
189. about that defeat the labyrinth says symptoms suppuration of the left ear, hearing loss in the left ear, spontaneous nystagmus, positive fistula test.
190. About what defeat the labyrinthitis symptoms absence of hearing on the left ear, spontaneous nystagmus left, absence of nystagmus in a caloric test?
191. Describe spontaneous symptoms in lesions of the left labyrinth (stage of irritation).
192. Describe the data of the objective examination in the lesion of the left labyrinth (stage of irritation).
193. Describe the data of the investigation in the oppression of the left labyrinth.
194. List the research data when turning off the right labyrinth.
195. List the symptoms of peripheral lesion of the vestibular analyzer.
196. List the symptoms of the central lesion of the vestibular analyzer.
197. List diseases in which symptoms may appear that are similar to labyrinths.

Task to check the learning ability to be able to

In the patient being:

1. To collect anamnesis, to conduct a survey of the patient and his relatives, to conduct a physical examination of the patient, to send for laboratory-instrumental methods of research and advice to other specialists, if necessary;
2. Interpret the results of the examinations, put a preliminary diagnosis to the patient, identify the necessary additional volume of studies to clarify the diagnosis, formulate a clinical diagnosis;
3. Develop a treatment plan for the patient, taking into account the severity of the disease, select and prescribe drug therapy, use non-drug treatment methods, conduct rehabilitation activities.

The task for checking the

In the patient being supervised:

1. Conduct an examination of the ENT of the patient's organs;
2. Interpret the data of laboratory-instrumental methods of investigation in patients;
3. Using the algorithm of setting a preliminary diagnosis and the orders of a detailed clinical diagnosis, to diagnose the patient, with subsequent referral to other specialists in the presence of concomitant pathology or to clarify the diagnosis.

## 5.2. Topics of coursework (projects)

Writing a course work curriculum is not provided.

## 5.3. Assessment fund

Frontal survey. The list of issues in paragraph 5.1.

Tests. List of test tasks in ANNEX 1

SITUATIONAL PROBLEM. List of tasks:

OBJECTIVE №1

The patient, 38 years old, complains of a feeling of dryness in the nose and throat, some difficulty in nasal breathing, a bad sense of smell, hoarseness, coughing. Recently, he notes weakness, severe fatigue. He believes that he fell ill four years ago, when he lived in Naryn Oblast, where he was born. Skin covers are clean. Changes from internal organs are not determined. Rhinoscopically determined infiltrates along the side wall and the bottom of the nasal cavity. Mucous membrane covering the infiltration, dry, there are crusts. Infiltrates spread along the side wall of the nasopharynx to the soft palate, forming a thickening in the center of it along the posterior surface.

Laryngoscopically: infiltrates are determined in the subglottic space in the form of symmetrical thickenings located below the vocal folds, parallel to them. The voice gaps wide enough, the vocal folds are mobile. Anticipated diagnosis? What needs to be done to clarify the diagnosis?

OBJECTIVE №2

The patient complains of severe pain in the right ear, radiating to the area of the temple and the crown, intensifying during chewing, to an increase in body temperature to 37.4. He believes that the disease began after he scratched the auditory canal, manipulating it with a match. Objectively: AD: a concha of the usual configuration. In the external auditory canal sharply narrowed, the eardrum cannot be examined. Lymph node located in front of the auricle, enlarged, painful on palpation. Sharply painful palpation of the tragus region. AS - without visible pathology. The whisper hears at a distance of 5 m on both ears. What is the diagnosis? How to treat a patient?

OBJECTIVE №3

Patient K., 28 years old, complained of hoarseness, a feeling of sadness and a sore throat, coughing. I got sick two days ago after drinking a cold beer. First there were unpleasant sensations in the throat in the form of sadness and scratching, and then hoarseness of the voice and cough. Objectively: the patient's condition is satisfactory, the temperature is normal.

Laryngoscopy: see slide no. 78 Describe laryngoscopic picture, diagnose, write prescriptions.

OBJECTIVE №4

Patient K., 3 years old, delivered by parents with complaints of barking cough and shortness of breath.

According to the mother, the child fell ill suddenly. The night before I went to bed healthy. Suddenly in the middle of the night the child coughed, woke up in fright, began to gasp, turned blue, coughed strongly, his voice was clean. This attack lasted 15 minutes. Gradually, the attack went away and the baby fell asleep. In the morning, such an attack repeated again. Objectively: the boy's condition is satisfactory, the temperature is 37.1. With a rhinoscope: narrow common nasal passages and mucous discharge in the nasal cavity, voice clear, coughing barking. Laryngoscopy: see slide №79. Describe laringoskopicheskiy picture ....., make a diagnosis, prescribe treatment.

OBJECTIVE №5

The patient B., 30 years old, complained of shortness of breath. The patient was treated by the therapist about the exacerbation of chronic pneumonia. Half an hour ago in the procedure room the patient was given an intramuscular injection of penicillin. Immediately after the injection, I felt uncomfortable in my throat, I began to miss the air. Objectively: the general condition of the patient is satisfactory, the temperature is normal, the patient is somewhat restless, with breathing a slightly prolonged inhalation.

Laryngoscopy: see slide no. 86 Describe laryngoscopy picture, diagnose, prescribe treatment, write prescriptions.

OBJECTIVE №6

Patient I., aged 18, complained of pains in the larynx, coughing, salivation, coughing up phlegm with blood veins, difficulty breathing, hoarseness of voice. This morning, during work, the part from the machine was broken and hit the patient on the neck. Immediately there was pain in the larynx, coughing, drooling with an admixture of blood, the voice became hoarse. Objectively: the general condition of the patient is satisfactory, the temperature is normal, the soft tissues of the anterior section of the neck are swollen, and there is an abrasion on the skin. the voice is hoarse, it coughs up phlegm with veins of blood, breathing is slightly difficult. Laryngoscopy: see slide No. 85

Describe the laryngoscopy picture, diagnose, plan the necessary measures and treatment of the patient.

OBJECTIVE №7

Patient K., 35 years old, complained of sharp pains in the throat when swallowing, inability to swallow food, copious salivation.

I got sick the night before. Accidentally drank a volley of liquid in the glass (I thought it was water). I immediately felt a pain in my throat and a cough. By morning the pain intensified, it became impossible to swallow food. Objectively: the patient's condition is satisfactory; the temperature is 37.6. Swallowing with a painful grimace. With pharyngoscopy the mucous membrane of the pharynx is hyperemic, the small tongue is covered with a white coating, the same plaque is noted in places on the back wall of the pharynx. Set the diagnosis, schedule a plan for further treatment of the patient.

OBJECTIVE №8

The patient, aged 26, complained of a fever, sore throat, especially severe swallowing, general weakness, headache, and pain in the calf muscles. I got sick 3 days ago. Objectively: the general condition is satisfactory, T = 38.2, swallowing with painful grimace. In the anterior cervical triangle, an angular lymph node, the size of a vasol, is palpable, painful.

Pharyngoscopy: see slide 2, left palatine amygdala. Describe pharyngoscopic picture, diagnose, prescribe treatment, write prescriptions.

OBJECTIVE №9

Patient B., 5 years old, complained of very poor health, high fever, hoarseness, cough, sometimes shortness of breath, which after coughing up sputum improves. A week ago, parents noticed a child's weakness, malaise, the child stopped playing, began to lie more. The last 3 days the condition is very difficult. Objectively: the girl is sluggish, apathetic, the skin is gray-earthly, her facial features are pointed, the temperature is 38. Pulse 120 beats per minute, soft, weak filling, arrhythmic. At auscultation, heart sounds are muffled. Breathing is difficult. At the time of inspiration, the traction of the supple places of the chest and abdomen is determined. The voice is soundless. Laryngoscopic pattern: see slide No. 95. Describe the laryngoscopic picture, make a diagnosis, schedule a plan for further treatment of the patient.

**OBJECTIVE №10**

Patient P., 35 years old, complained of hoarseness of voice. I'm sick for about two months. Objectively: the general condition of the patient is satisfactory, the temperature is normal, the voice is hoarse. Laryngoscopic picture: see slide No. 88. Describe the laryngoscopic picture, make a diagnosis, schedule a further examination and treatment of the patient.

Report with a presentation subjects of reports:

1. Semi-improving and restorative operations in the middle ear.
2. Nevrinoma 8 pairs of cranial nerves (clinic, diagnosis, treatment).
3. Possibilities of endoscopic surgery in rhinology.
4. Venener's disease (etiology, pathogenesis, clinic, diagnosis and treatment).
5. Scleroma of the upper respiratory tract (pathogenesis, clinic, diagnostics.leuchenie).
6. Syphilis of the larynx (diagnosis, clinic, treatment). Curation of patient

At the admission of the supervised patient, do the following:

1. To familiarize with subjects of an ENT-disease of the patient.
2. Implement the rules established by the National Hospital MZKR.
3. Establish confidential contact with the patient.
4. Collect complaints, anamnesis of illness and life of the patient.
5. Make therapeutic inspection.
6. Describe ENT status.
7. Make a preliminary diagnosis.
8. To analyze the results of laboratory and instrumental methods of patient research.
9. Draw a differential diagnosis.
10. Deliver a clinical diagnosis.
11. Determine the tactics of the anticipated treatment.
12. Write diaries, stage or discharge epicrisis in the educational history of the patient.
13. Briefly summarize the etiology, pathogenesis, clinic and treatment of ENT disease according to modern literary sources.

#### 5.4. List of types of assessment tools

Front-line survey  
Situational challenge  
Report with presentation  
Curation of patient  
Scales of assessment by types of assessment tools in ANNEX 2

### 6. EDUCATIONAL-METHODICAL AND INFORMATION SUPPORT OF THE DICIPLINE (MODULE)

#### 6.1. Recommended literature

##### 6.1.1. The main literature

	Authors, compilers	Title	Publishing house, year
L.1.1	P.L.Dhingra, Shruti Dhingra	Diseases of Ear, Nose & Throat and Head & Neck Surgery (ENT)	Elsevier India, 2021

##### 6.1.2. Additional literature

	Authors, compilers	Title	Publishing house, year
L2.1.	P.L.Dhingra, Shruti Dhingra	Manual of Clinical Cases in Ear, Nose and Throat	Elsevier India, 2021
1.2.2	T.A.Izaeva, V.A.Nasyrov., M.A. Madaminova, M.A.Nuraliev, M.V.Nasyrov, A.B.Turumbekova, B.N.Zhumabaeva	Methodological instructions for students for practical lessons in otorhinolaryngology	Bishkek, 2024

#### 6.3. List of information and educational technologies

##### 6.3.1 Competence-oriented educational technologies

6.3.1.1	Traditional educational technologies: for the organizations of studying of discipline are used reproductive educational technologies which to treat explanatory illustrative lectures, an obyasnitelno-razyasnitelny practical training. solution of situational tasks and analysis of educational stories of diseases on noologiya.
6.3.1.2	Innovative educational technologies: interactive form of technology - subjects for studying which monitoring to be made in the form of the presentations, reports with use of multimedia are given. Rounds of professor and teachers of department clinical offices, demonstration and analysis of patients

6.3.1.3	Informational educational technologies: Self-contained use by the student of the computer equipment and Internet resources for realization of practical tasks and self-contained work.
<b>6.3.2 List of intelligence help systems and software</b>	
6.3.2.1	<a href="http://elibrary.ru/">http://elibrary.ru/</a>
6.3.2.2	<a href="http://sciencedirect.com/">http://sciencedirect.com/</a>
<b>7. MATERIAL SUPPORT OF DISCIPLINE (MODULE)</b>	
7.1	Lecture audience on 100 seats on the basis of National hospital at MZKR (department of otorhinolaryngology).
7.2	educational audiences for carrying out practical occupation 4 educational audiences on the basis of National hospital at MZKR (department of otorhinolaryngology, T. Moldo Street).
7.3	expressly equipped audiences with a complex of an educational methodological support on the basis of National hospital at MZKR (department of otorhinolaryngology)
7.4	The rooms provided for rendering the qualified otorhinolaryngology medical care to patients are equipped with a specialized inventory and medical products.
7.5	set for rendering the emergency medical surgical LOR-help (a tracheostomy, opening of phlegmon of a neck etc.), antishock set (on the basis of National hospital at MZKR department of otorhinolaryngology).
7.6	multimedia complex (laptop, projector).
7.7	a set of slides on the realized subjects.
7.8	educational tables
7.9	educational posters and stands.
<b>8. METHODOLOGICAL INSTRUCTIONS FOR STUDENTS ON MASTERING THE DISCIPLINE</b>	
	<p>The procedure sheet of discipline in the APPENDIX 3</p> <p><b>MODULAR MONITORING ON DISCIPLINE INCLUDES:</b></p> <ol style="list-style-type: none"> <li>1. monitoring: digestion of material on classroom occupations (lectures, practical, including visit and activity is considered) and realization of obligatory tasks for self contained work.</li> <li>2. Border monitoring: check of completeness knowledge and ability of module material realization modular control a task is carried out in writing and is an obligatory component of modular monitoring, in general.</li> <li>3. The intermediate monitoring: determination of the reached level of knowledge or definition of a difference between the actual level of the acquired material and set intimately the modules connected among themselves.</li> </ol>

### **Main requirements to the intermediate monitoring**

The intermediate monitoring allows to determine set of knowledge and ability at the student by completion of studying of discipline in the form of differentiated offset(test). The teacher is granted the right to pass without poll to students who got more than 60 points on control. On the intermediate monitoring the student has to answer correctly theoretical questions of the ticket and solve a situational problem(task). students can use visual aids, technical means, training programs.

Assessment of the intermediate monitoring:

- 20 points - questions for check of level of proficiency "TO KNOW"(in case at answers to the asked questions correctly forms the basic concepts)/

-20-25points-tasks for check of level of proficiency TO BE ABLE, TO OWN (in case the student correctly formulates a substance of the problem given in the ticket and provides recommendations about its decision.).

-35-30 points- Tasks for check of level of proficiency (n case of the full implementation of a control task)

#### **Study guide on the organization of studying of discipline:**

Tutoring develops from classroom occupation (54 hours), the including lecture course and practical training, self-contained work.

Practical training is carried out in the form of oral poll of the given material, demonstration of practical skills of otorhinolaryngological bodies at the patient, demonstration of the video record and others visual grant, solution of situational tasks, test task, analysis of clinical examples, carrying out role-playing games. At analysis of nosological forms a disease it is recommended to adhere to the following sequence:

-give definition

-relevance of the studied nosological form and history of the studied question

-pathogenesis, role of exoge

netic and internal causes in development of a disease

-clinical picture

-criteria for evaluation of disease severity depending on a disease stage

-complication

-possible outcomes of a disease, cause of death

-justification of the diagnosis depending on a disease stage

-treatment-conservative and surgical treatment

-rendering urgent ambulance in policlinic and in hospital

-dispanterization and rehabilitation of patients

- health precaution

According to the Federal state educational standard BII wide use in educational process of the active and interactive forms occupation is necessary. Interactive occupations have to make 10% classroom occupation.

#### **SELF-CONTAINED WORK OF THE STUDENT**

It is meant preparation for a practical training and includes studying of express literal make the paperture., PRESENTATIONS, business game, self-contained work to be carried out in limits of particular time. each student is provided with necessary material of department and to libraries of the university. According to each section at department methodical recommendations for students are developed, study guide for teachers. Work of the student in group forms feelings of collectivism, responsibility and skill to communicate. It is necessary to pay attention to formation of skills of a promise with the patient. Work with patients promotes formation of deontological behavior. Accuracy and discipline. Questions on an otorhinolaryngology are included in final state assessment of graduates in "odontology".

#### **The report with the presentation. Rules of preparation and writing:**

Oral performance report has to represent not retelling of others thoughts, but attempt of self-contained work. All footnotes which are available in work carefully are verified supplied with "addresses". All cases of plagiarism have to be excluded. At the end the list of used dressing materials is given. Preparation of the report for occupation.

Main stages of preparation of the report:

-topic

-consultation of the teacher

-preparation of the plan of the report

-work with sources and literature, collecting material

-writing of the text of the report

-performance with the report, answers to questions

Requirements to students by preparation of the presentation and its protection on occupation.

1 The subject of the presentation gets out the student of the offered FOS list, it has to be agreed with the teacher and correspond to an occupation subject

2 Stages of preparation of the presentation: purpose and tasks of this work, maintenance and conclusions of the presentation. It is necessary to answer the following questions:

- what presentation purpose?

-what duration of the presentation and plan of contents?

3 Manufacture of the presentation by means of Microsoft PowerPoint: the text has to contrast with a hum noise. do not place several blocks on one slide material on a slide can be divided on main and padding... it is recommended to use a font 22-28, subtitle 20-24, information in tables 18-22, quantity of slides no more than 30.

4 Do not read literally. he student to give new information, it is good to be guided on a presentation subject. to answer quickly questions.

5 The student has to finish in particular time. observe time limit: 10 minutes, discussion of 5 minutes.

**ORDER OF CARRYING OUT KURATION OF THE PATIENT** to be carried out according to the following scheme.

1. Theoretical preparation for the curator of a patient (introduction to the topic of chronic mesotympanitis);

2. Compliance with the regime and rules established by the National Hospital of the Ministry of Health of the Kyrgyz Republic, hospital (availability of health records, etc.);

3. There are 2 students per patient;

4. Establishment of confidential contact with the patient;

5. Collection of complaints, anamnesis of the disease and life of the patient;
6. Inspection and examination of the patient by internal organ systems;
7. Inspection and description of ENT status;
8. Establishing a preliminary diagnosis;
9. Collection of laboratory and instrumental survey methods;
10. Conducting a differential diagnosis of chronic otitis media;
11. Statement of the clinical diagnosis;
12. Description of the tactics of the proposed treatment;
13. Writing diaries, stage or discharge epicrisis in the educational history of the patient;
14. Brief summary on etiology, pathogenesis, clinic and treatment of chronic otitis media according to data modern literary sources;
15. Discussion of the educational history of the disease in the group among students and teachers of the department.

A diary

practical skills in ENT diseases

Specialty \_\_\_\_\_ course \_\_\_\_\_ group \_\_\_\_\_

FULL NAME. student \_\_\_\_\_ teacher \_\_\_\_\_

Practical exercises

Methods of research

1. Oropharyngoscopy

2. Anterior rhinoscopy

2 Rear Rhinoscopy

1. Indirect laryngoscopy

2. Otoscopy

3. Research of acuity of hearing

4. Examination of auditory function

5. Investigation of the vestibular function

6. Reading radiographs

3. Therapeutic manipulations

Toilet of external auditory canal

Removing Sulfur plugs

Infusion of drops in the ear, nose

Blowing the ears of Politizer

Bandage on the ear

Front and back tamponade of the nose on the model

Taking a smear for bacteriological examination from the nasal cavity,

pharynx and external auditory canal

Curation of patients

Reception of polyclinic patients

Teacher's signature

#### SCHEME HISTORY OF ILLNESS OF THE AMBULATORY ENT OF THE PATIENT

This section includes the main complaints of the patient, starting with the ENT organs, then in relation to other organs. The history of this disease In this section, it is necessary to describe in detail the onset (with what is connected), the course and development of the present disease from its first manifestations to the time of the patient's examination by the doctor. It should be specified how and when treatment was conducted and its effectiveness. Life story This section of the outpatient card records information about the diseases transferred, about heredity, about working and living conditions, about bad habits. Particular attention is paid to clarifying the allergology anamnesis, both in the patient himself and his parents and children (allergic manifestations include bronchial asthma, rheumatism, hay fever, Quincke's edema, eczema, intolerance to drugs, food, urticaria, etc.). Current status General: satisfactory, moderate, severe (briefly describe the severity of the organs). Examination of ENT organs: nose and paranasal sinuses (in detail). The shape of the external nose is not changed (if changed, how), the projection area on the face of the walls of the frontal and maxillary sinuses without singularities (if features, then what). Palpation of the anterior and lower walls of the frontal sinuses, the exit points of the first and second branches of the trigeminal nerve, the anterior walls of the maxillary sinuses is painless (if painful, then exactly where the character of the pain is). Nasal breathing when checking the breakdown with fleece on the right and left (free or the nature of the difficulty), the sense of smell is preserved (to what extent is the I, II, III, IV degree violated). With anterior rhinoscopy, the anterior nose of the nose is free, the nasal septum is along the middle line, the mucous membrane of the nose is pink (cyanotic, whitish, oedemic), lower (hypertrophied, dry, atrophic), nasal passages are loose, shells are not enlarged: there is no detachable nasal passage (pathology specifically describe). On the roentgenogram of the paranasal sinuses from I / IX -2005. the frontal maxillary sinuses, cells of the latticed labyrinth, the main sinus are transparent (or indicate the nature of the dimming of the particular sinus). Regional lymph nodes Submandibular, chin, anterior and posterior cervical lymph nodes are not palpable (or indicate the size of which enlargement, soreness).

#### Oral cavity - oropharyngoscopy

The mouth opens freely. The mucous membrane of the lips, gums, inner surface of the cheeks is pink, moist, the mouth of the excretory ducts of salivary glands of the parotid, submandibular and sublingual without features. The tongue is moving, moist, pale pink. The mucous membrane of the hard and soft palate is pink, moist: the soft palate is movable (note pathology and specifically characterize). Teeth are sanitized (caries).

#### Pharynx - mesopharyngoscopy

The oropharynx. Palatine arches are contoured, pink in color (their edges are hyperemic, infiltrated, edematous, soldered to the tonsils), palatine tonsils are of size (I, II, III degrees of magnification, behind the arch), lacunae are not enlarged (widened), no abnormal contents in lacunae or there are caseous, purulent plugs, liquid, thick, purulent contents). The surface of the tonsils is smooth (bumpy). The posterior wall of the pharynx is wet (dry), pink in color, the lymphoid granules are hypertrophied and atrophied. The pharyngeal reflex is preserved (pathology is specifically characterized).

#### Nasopharynx

The nasopharynx is free (or the 3rd amygdala is enlarged I, II, III degrees), the nasopharyngeal mucosa is pink, moist, the free choana (or the posterior ends of the lower, middle, upper nasal concha are thickened or there is a choana polyp, swelling). The mouth of the auditory tubes is well differentiated.

#### Larynx

The lingual almond without features, vallecula free, the posterior and lateral walls of the pharynx pink, wet, pear-shaped sinuses (with phonation) well open, loose, the mucous membrane of pyriform sinuses pink, moist.

#### Larynx

Regional lymph nodes of the submaxillary, deep cervical, pre-laryngeal, pretracheal are not palpable. The larynx of the correct form is passively mobile, the symptom of the crunch of cartilage is expressed. With laryngoscopy: the epiglottis is unfolded in the form of a petal, the epiglottis mucosa in the area of arytenoid cartilages, inter-chapel space and vestibular stores (false ligaments) pink, moist with a smooth surface, vocal folds (true vocal cords) pearly gray, vocal folds mobile phonation) are completely closed, at the entrance - a widegaped voicetal, free space underlayment. Regional lymph nodes Submandibular, chin, anterior and posterior cervical lymph nodes are not palpable (or indicate the size of which enlargement, soreness).

#### Ears

Right ear. The auricle of the correct form, with palpation of the mastoid process, the tragus pain is not revealed. Otoscopy: the external auditory meatus is wide, contains a moderate amount of sulfur. The tympanic membrane is gray in color with a pearly hue. Short process and hammer handle, light cone, front and back folds are well contoured. Examples of pathology, retracted, thickened, light cone truncated, absent: perforation round, oval, central, marginal posterior, anterior, 3x5 mm in size, in auditory canal purulent discharge, dense, odorless. Removed by two blots probe with fleece. X-ray data from

Left ear. The auricle is the right shape. Palpation of the mastoid and tragus is painful: (painless). The external ear canal is narrowed (its diameter is less than 7 mm), contains a moderate amount of sulfur, its skin is infiltrated, the back - the upper wall hangs. The tympanic membrane is of a gray color, it is retracted: in the posterior-upper section there is an oval perforation with a size of 2x3 mm, when the probe probe is felt, the roughness of the walls of the tympanic cavity is determined and the cholesteatom masses are removed.

#### X-ray data from

In the images in the projections of Mueller and Mayer, a carious cavity is defined in the attico-antral region and sclerosis of the mastoid process of the left ear.

#### Results of a functional analysis of the auditory analyzer

##### AD Research Methods AS

##### Subjective noise

##### Whisper speech

##### Speaking

##### C128

##### Air

##### Bone

##### C2048

##### The Rinne test

##### Weber's test

##### The Schwabach test

##### Conclusion

##### Preliminary diagnosis

##### Laboratory data

##### Differential diagnosis

##### Etiopathogenesis (briefly)

##### Clinical diagnosis (rationale)

##### Treatment:

##### General, local;

##### Write prescriptions;

If surgical treatment is necessary to describe the course of the operation;

The Diaries (2) Epicrisis.

#### METHODS OF NOSE INSPECTION AND NOSE PRIMARY CASES

1 stage, a / put the patient right side to the light source.

b / The student sits opposite the patient and puts his feet inside / to the table /,  
in / The light source must be placed at the level of the right auricle of the  
patient, slightly behind.

Stage 2, a / Put on the frontal reflector.

b / Set the frontal reflector opening at the level of the left eye, in / Set the  
reflector reflected by the reflector on the tip of the nose, and the "Bunny" is  
correctly positioned if the left eye sees the illuminated nose through the  
reflector opening.

Stage 3, a / Exterior examination of the nose.

b / Palpation of the bones of the nose, upper-jaw and lobes

Stage 4. Determine the respiratory function.

a / To the index fingers of one hand, press the left wing of the nose to the nasal  
septum.

b / In the other hand, take a small piece of cotton wool and bring it to the  
vestibule of the nose.

c / Ask the patient to take a short breath and exhale,

g / By deflection of the fleece, decide on the respiratory function through both  
half of the nose.

5 stage. Anterior rhinoscopy.

1. With your right thumb, lift the tip of your nose and examine the vestibule of your nose. Normally the vestibule of the nose is free, there are hair.
2. Take in the left hand a nasolander. On the open palm of the left hand, put the nose rider with the "beak" down.

Place the thumb of the hand on the upper screw, the nose, the index finger on the lower screw of the nose spreader, 4 and 5 fingers between the brancamino scavenger and the 3 finger on top of the right brace.

Stage 6. I. The elbow of the left arm is lowered. Only the wrist remains mobile.

The right hand is located on the parietal region of the patient, with which the desired position of the head is realized.

2. Nosorasshiritel in a closed form to enter on the threshold of the nose of the right half of the nose of the patient. The right nosorassshirele must be in the lower-inner corner of the vestibule of the nose. The left branch - the top of its direction to the wing of the nose
3. Press the third finger of the left hand on the brunch receiver. and uncover the right half of the nose with the nose extension.

7th stage. Inspection of the nasal cavity on the right.

1. The main nasal passage is free. The nasal septum is along the middle line, the mucous membrane of pink color, smooth surface.
2. To examine the lower nasal passage, the patient's head should be tilted. The anterior sections of the lower nasal passage are free,
3. Day of examination of the anterior part of the nasal cavity:

a / slightly tilt the head to the right and back;

b / "beak" of the nose spreader outward and open.

The middle nasal passage is free. Mucous membrane of the middle shell pink color, smooth surface.

8th stage. Examination of the left side of the nose.

A closed nasal dilator is inserted into the vestibule of the nose (left half). The right Branshana-expander should be at the bottom, the left-upper.

I and 2 \* in the same way as described in step 7.

#### BACK RINESCOPE

1. With your left hand, take a spatula - the thumb from the bottom, 2 and 3 on top,
2. Push the tongue downwards with pressure in the middle third of the tongue, illuminating the mucous membrane of the posterior pharyngeal wall.
3. With your right hand, take the nasopharyngeal / small / mirror fixed with a screw on the handle of the extension piece.
4. Start a heated mirror, sliding along the spatula and not touching the mucous membranes, over the soft palate.
5. Move the handle of the mirror in a position at an angle of 45 degrees, casting light into the nasopharynx.
6. By sending rotary arrows along the axis of the light ray, consider the elements of the nasopharynx: the choana with the back ends of the nasal conchae, the mouth of the Eustachian tubes, the adenoid / nasopharyngeal tonsil.

#### SURGERY RESEARCH

1. Epipharyngoscopy - see the method of posterior rhinoscopy.

Oropharyngoscopy / examination of the mouth and mouth cavity, pharynx at the level of the mouth.

b / condition of teeth / presence of dental caries, sealed, artificial teeth /, bite.

1. Inspection of the oral cavity.

The subject should open his mouth calmly, without any tension, evenly breathing. If there is a pain in opening the mouth, find out the reasons. In children, with resistance, open the mouth, the assistant must fix the child, pressing both halves of the nose to the nasal septum, if the child does not open his mouth in this position, then the spatula is inserted through the corner of the mouth behind the back molar to the root of the tongue, which causes the emetic movement and the child is forced to open his mouth: a / examination of the tongue / dry, moist, covered, papillae severity, geographical, presence of leukoplakia.

b / the mucous membrane of the bottom of the mouth, the mouth of the bartholin duct in / the mucosa of the soft and hard palate, the height of the latter, the mobility of the soft palate, the distance from the posterior pharyngeal wall, the presence of scars, fistula and cleft palate.

2. Inspection of the oropharynx:  
and / 'with a spatula to press down the front 2/3 of the tongue without sticking out the last from the oral cavity;  
b) in case of obstinacy, to force the patient to make a background / pronounce the sound "A" or "E";  
in / palatine arches / congestion, swelling, spasticity with palatine tonsils /; g / palatine tonsils / magnitude, consistency, adhesions, crypts, .contained lacunae, raids /;  
d / posterior pharyngeal wall / mucosal status, presence granules, mucopurulent secretion, crusts /;  
e / lateral grooves of pharynx / their severity, color of mucous membranes.

3. Hypopharyngoscopy - see the method of laryngoscopy.

Larynx examination

1. External examination and palpation of the larynx. Pay attention to the color of the skin and its integrity, the severity of the venous pattern, the presence of scars, fistulas, pathological protrusions - inflammatory infiltrates, blastomas, cysts; the median or asymmetric position of the larynx and trachea, the laryngeal mobility, whether there is no entrainment of the supple places of the neck at the time of inspiration and soreness.
2. The examinee is asked to open his mouth and stick out his tongue.
3. Using a gauze pad, the tongue is held by the physician's left arm. With the index finger of the left hand, the doctor raises the upper lip of the patient to the top over the incisors, thereby increasing the field of view. The middle finger is superimposed on the lower surface of the tongue, and over the tongue is large.
4. Light with the help of a frontal reflector is directed to the base language.
5. The doctor takes the guttural mirror in his right hand and holds it like a writing pen.
6. The mirror surface of the mirror is preheated to make it misted up in the mouth. In order not to burn the patient, the doctor must first touch the metal surface of the mirror to the rear surface of his brush.
7. Mirror is injected into the mouth with a mirror surface downwards and applied to the base of the tongue. The tongue is squashed back and forth. The patient is calm and evenly breathing.
8. In the guttural mirror consistently examine all the formations of the lower parts of the pharynx and larynx: the root of the tongue, vallecula, epiglottis, pear-shaped fossa, true and false vocal folds.
9. Determine the mobility of the vocal folds: with the phonation of the "AND" sound, the folds approach and the voice gap closes, at the entrance the slit opens.
10. Voice - clear, sonorous, hoarse, aphonia.
11. Breathing - free, difficult, degree of difficulty / 4th degree according to Udriz /.

#### METHODS OF EHA STUDY

Stage 1. Outdoor inspection:

a / examine the auricle, the entrance external auditory meatus, mastoid process;  
b / with one hand to pull the auricle anteriorly, with the thumb of the right hand to palpate the mastoid process in the projection: antrum, sigmoid sinus, apex;  
in / not pulling the shell, the thumb of the right hand to push the tragus to determine whether there is painfulness to palpate the lymph nodes in front of the external auditory canal.

2 stage. Otoscopy.

a / illuminate the ear with a reflector;

b / with one hand pull the auricle back and forth:

examine the entrance to the external auditory canal. Determine the size of the desired funnel;

in / take the funnel with the thumb and index finger of the other hand and with light rotational movements insert it into the membranous part of the ear canal and transmit 1-2 fingers of the left hand. Clean with a probe, with swollen cotton outer ear canal / if necessary / from sulfur, epidermis or crusts.

Stage 3. Inspection of the tympanic membrane:

a / to find the identifying points of the tympanic membrane: light reflex, short process and hammer handle, anterior and posterior folds, navel; b / characterize the color of the tympanic membrane (normally pearly gray); to / characterize the changes in the identification mark when the tympanic membrane is pulled in / if it is /;

g / mentally divided the eardrum into 4 squares; d / characterize the location and size of the perforation of the tympanic membrane (if it is).

4 th stage. Acumetry / examination of the function of the auditory analyzer.

Study whispered speech and spoken; a / put the patient at a distance of 6 meters;

b / ask to turn to the researcher with one ear, tightly closing the second finger;

in / pronounce the words in a whisper due to backup air, using the table

Voyachek;

g / with poor perception consistently approach closer to the patient by 1 m, each time examining the hearing:

d / with a poor perception of whisper speech to make a study of conversational speech, starting at 6 m.

#### RESEARCH OF CAMERTONS

1. The Rinne experiment / comparison of bone and air conduction /: a / Set the tuning fork C 128 with the thumb and index finger of the left hand;

b / establish its foot on the mastoid process;

after the hearing is stopped, bring the branches to the external auditory passage;

g / the presence of perception through the air in this case is denoted as a positive experience of Rinne.

2. Weber's experience / definition of lateritization of sound;

a / install sounding tuning fork S128 on the middle of the crown; b) establish on the subjective response of the patient side of lateritization / better audibility / sound; in / defeat of the sound-conducting apparatus is characterized by the loss of sound in the same direction, from the sounds of the perceiving in the opposite.

3. Schwabach's experience / determination of bone conduction values /:

a / sounding tuning fork S128 set on the mastoid process;

b / after ceasing hearing to be transferred to the mastoid process researcher;

in / absence of perception by the investigator testifies to the good function of the patient's sound-receiving apparatus.

4. Determine the duration of the ear's perception of the sounding tuning forks C128, C512, C1024, C2048, comparing with the norm - the data of the investigator / in seconds /.

5. State the findings in the audit certificate (see the survey scheme).

#### INVESTIGATION OF THE FUNCTION OF THE VESTIBULAR ANALYZER

1. Find out if there are any subjective symptoms of the dysfunction of the vestibular analyzer in the subject / dizziness, nausea, vomiting and other.

2. Determine if there is spontaneous nystagmus? To do this, put the index finger of the hand at a distance of 60-70 cm from the patient's eyes, move it to the right and ask the patient to fix a finger on his finger. In the presence of nystagmus, rhythmic twitchings of eyeballs appear. Repeat the same when looking left.

Identify spontaneous nystagmus:

a / along the plane / horizontal, vertical, rotary /;

b / in the direction / right, left, up, down, one way or both /;

in / in force% 1,2,3 degrees /.

Nystagmus 1 degree - appears when looking only toward the 'fast component.

Nystagmus 2 degrees - appears and when looking forward.

Nystagmus of the third degree is preserved when looking towards the slow component.

g / in amplitude / large-scale, medium-large, fine-grained /;

д / on the speed of oscillations / alive, sluggish /;

3. Balancing disorders. Proceed as follows:

a / in the Romberg position;

b / walking with closed eyes forward, back, flank gait;

in / palcenosovaya sample;

g / finger-finger sample;

d / adiadochokinesis.

**ROTARY SAMPLE**

1. Explain to the researcher that the rotation will be performed with the eyes closed, after the chair is stopped, you need to open your eyes and look at the finger of the doctor.
2. To investigate the horizontal semicircular canals, the researcher sits on the rotating armchair of the Barani, tilting the head forward and downward by 30 and closing his eyes.
3. Make a right / clockwise / rotating chair 10 turns for 20 seconds / speed I turn in 2 seconds /. Sharply stop the chair, the patient should open his eyes and look at the finger placed at a distance of 60 cm from the eyes to the left. On the stopwatch, measure the duration of the post-nostalgic nystagmus. Repeat the above with the patient turning left / counterclockwise /. Normally, the duration of the post-partitive nystagmus to the right and to the left is the same and is equal to 20-30.
4. Determine the degree of nystagmus / 1,2,3 /, direction, strength, amplitude and swing speed.
5. Give a description of the vestibulo-vegetative and vestibulo-somatic reactions that arise after rotation.
6. For the study of the frontal canals, the patient's head should be tilted 90 degrees forward and down, for the sagittal canal, on the right and left shoulder.

**CALORIC SAMPLES**

1. It is necessary to have a 20g and 100t syringe a kidney basin, sterile water, a water thermometer.
2. Make a caloric sample with a minimum amount of water / Kobraq's sample. Type 100g 15 boiled water in a syringe, slowly / for 30 / pour into the right ear canal.
3. Record the patient's view on your index finger, placed in front and to the left of the patient at 60cm. Using the stopwatch, mark the latent period, the beginning of the caloric nystagmus and the end of it
4. Normally, the latent period before the appearance of the nystagmus is 25, the duration of the nystagmus is 10-15.
6. Repeat the caloric test with the maximum amount of water / by Barani /
7. Repeat the caloric test, according to the indicated technique, of the other ear.

**THE OTOLITE VOYACHEC REACTION**

I. Put the researcher on the rotating armchair Barani, close your eyes, tilt your head and body 90 degrees. In this position, rotate the subject to the right / clockwise / with a speed of one turn in 2, for 10 ", that is, make 5 revolutions. Then stop the chair and, without changing the position of the subject, wait 5 ", then propose to straighten / occupy a vertical position." At the moment of changing the position of the body, a reaction occurs in the form of the inclination of the body and the head to the side, as well as the vegetative reactions. the subjects are divided according to KL Khilov's scheme into the following groups:

- 0 degree - persons who do not give somatic reactions of falling;
- 1 degree - persons giving deviations from the vertical axis by 5 °;
- 2 degree - deviations in the range of 20-25 °;
- 3 degree - deviation / reaction of falling / more than 25 °.

According to the severity of vegetative reactions, the subjects are divided into the following groups:

- 0 degree - absence of vegetative symptoms;
- 1 degree - the appearance of a feeling of nausea,
- 2 degree - nausea, blanching of the skin, the appearance of sweat, etc .;
- 3 degree - the appearance of vomiting, blanching, sweat, etc., marked by symptoms of seasickness.

2. Give an estimate of the vestibulo-somatic and vestibulo-vegetative reactions that occurred during the otolith reaction of the subject.
3. Repeat Q P. while rotating in the opposite direction / left - counterclockwise /. Evaluate the reactions that occurred.

**1. SELF-DEVELOPING PRACTICAL SKILLS****STAGE 1. ANAMNESIS.**

Find out whether there are subjective symptoms of vestibular analyzer dysfunction in the examinee, who are characterized by complaints of dizziness - sensations of imaginary rotation or displacement of the surrounding environment, its dependence on the change in the position of the head, violation of gait,

Find out if there are subjective symptoms of vestibular analyzer dysfunction in the examinee, who are characterized by complaints of dizziness - sensations of imaginary rotation or displacement of the surrounding environment, its dependence on the change in the position of the head, gait disturbance - deviation or fall in a certain direction, nausea and vomiting.

**2 STAGE. SPONTANEOUS INSTAGM**

Is there a spontaneous nystagmus? To do this, set your index finger of the right hand at a distance of 60-70 cm from the patient's eyes. Ask the patient to fix on the finger look, move your finger to the right, if spontaneous nystagmus eats, determine it:

- a) along the plane (horizontal, vertical, rotary);
- b) in the direction (left, right, down, up one or both sides);
- c) in strength (1 degree - appears only when looking towards the fast component, 2 degrees - when looking forward, 3 degrees - is preserved when looking and the side of the slow component);
- d) in amplitude (large-scale, medium-scale, fine-grained);
- e) by the speed of the oscillations (living sluggish).

Do the same to the left.

**3 STAGE. STATO-KINETIC FUNCTION.**

1. To investigate the patient in the position of Romberg. For this, the subject is placed with closed eyes and closed socks and heels in a vertical position, his arms are stretched at the chest level, his fingers are open. With lesions of the vestibular analyzer, the subject is diverted to the side opposite to the nystagmus.

2. In the absence of a deviation of the trunk in Romberg's position, put the tested in a sensitized Romberg position, in which one leg is in front of the other but one line, with the toe of the leg behind it touching the heel of the leg in front. In this situation, even minor static disturbances are easily detected.

3. Rotate the patient's head to the left 90 °. When the patient's head rotates, the angle of the torso deviates, coinciding with the direction of the slow component of the nystagmus. So when the nystagmus is left, the patient falls forward, with the nystagmus to the right - back.

With cerebellar disease, a change in the position of the head does not affect the direction of the fall.

4. Study of gait in a straight line, for which the patient is offered to walk five steps forward in a straight line, then backward, first with the eyes open and then with the eyes closed, with a disturbance in the function of the vestibular analyzer, the patient deviates from the straight line in the direction coinciding with the direction slow component of nystagmus, in case of cerebellum disturbance - in the direction of defeat.

5. Examination of the flank gait, for which the researcher puts the right foot to the right and puts the left foot on the left, similarly does the left side. When the vestibular analyzer is disturbed, the flank gait performs in both directions, with the defeat of the cerebellum - does not perform in the direction of the lesion.

**4. STAGE, TONIC VESTIBULARER-ACTION**

1. Identify the reaction of spontaneous deviation of elongated arms with closed eyes. When the vestibular analyzer is damaged, spontaneous deflection of both elongated arms towards the slow component of the nystagmus occurs.

2. Examine the sample with a miss.

**FINGER-FINGER:**

- a) the researcher sits opposite the patient, tightens his arms at the level of the patient's pile of hands on his knees;
- b) offer the patient extended arms forward with closed eyes with index fingers to get into the index fingers of the doctor.

**PALACE-BOW:**

- a) suggest the patient with the index finger of the right hand to get to the tip of his nose, first with the eyes open, then with the eyes closed, the same with the index finger of the left hand.

When the vestibular analyzer is damaged, the patient misses both hands in the direction of the slow component of the nystagmus. When a cerebellum lesion is missed by one hand (on the side of the disease) to the side,

**5 STAGE, ADIADOKINESIS.****(SPECIFIC SYMPTOM OF BRAIN DISEASE)**

- a) put the patient in the position of Romberg;
- b) offer to produce both hands supination and pronation. When the cerebellum is affected, a sharp lag of the hand is observed, respectively, to the diseased side.

**6 STAGE. ROTARY SAMPLE**

- a) Sit the patient on a swivel chair (Barani chair) so that the back is firmly resting on the back of the chair, the burden is on the stand, hands on the armrest.
- b) Explain to the researcher that there will be a work of rotation with closed eyes, after stopping the chair, you need to open your eyes and look at the finger of the doctor.
- c) To investigate the horizontal semicircular canals, tilt the head of the person under investigation and down by 30, suggest closing your eyes.
- d) Make a right on the rotating chair 10 turns for 20 seconds (speed in turn 2"), then abruptly stop the chair.
- e) The researcher must quickly raise his head and focus his eyes on the finger of the investigator (finger on the left at a distance of 60-70 cm from the eyes),
- f) Give a characteristic of nystagmus, (in time, in direction, in plane of strength, amplitude, speed),
- g) Give a description of the vestibulo-vegetative and vestibulo-somatic reactions that arise after rotation, according to KL. To Khilov:  
 1 degree - absence of vestibulo-vegetative reactions;  
 2nd degree - the appearance of a feeling of nausea;  
 3 degree - nausea, hyperhidrosis, blanching;  
 4 degree - the same symptoms in combination with vomiting.
- h) For the study of the frontal canals, the patient's head should be tilted 90 degrees forward and down, for the sagittal canals, to the right or left shoulder.

**7 STAGE. CALORIC SAMPLES****(DEMONSTRATED BY TEACHER)**

- a) Find out from the researcher whether he had a middle ear disease, if it was necessary to perform an otoscopy. If there is no perforation in the tympanic membrane, you can proceed to a caloric sample.
- b) Collect in the Syringe Jane 100.0 ml 19 boiled water.
- c) Seat the subject with a head deviation of 60
- d) Enter the collected water on the posterior wall of the right external auditory meatus for 10 ".
- e) Ask the researcher to fix a look on your index finger, set to the left 60-70 cm from the subject's eyes.
- f) Determine the latent period of nystagmus - the time from the end of the introduction of water into the ear before the onset of nystagmus (normal 25/30 ").
- g) Determine the nystagmus of the plane, direction, strength, amplitude, speed and duration, Normally, the duration of nystagmus is 50-70.
- h) Similarly, conduct a caloric test on the left, while the patient's eye is fixed by reference.
- i) Carry out a caloric sample with hot water, i.e. +42 similar to cold water.

With a cold caloric sample - nystagmus in the opposite direction to the irritated labyrinth. With a hot caloric sample - nystagmus in the same direction

**8 STAGE. VOYAGHETA OTOLITOVAYA REACTION (OR)**

- a) Sit the patient in the armchair of the Barani, suggest closing your eyes and tilting the body with the head at 90.
  - b) Make 5 rotations to the right for 10, then quickly stop the chair.
  - i) Wait 5 seconds, then offer the subject to straighten up quickly.
- The status of the function of the otolith apparatus is estimated by the deviation of the body and head in the direction of rotation and vegetative reaction.

Somatic reactions of 3 degrees:

- 1 degree - weak - deviation by an angle from 0 to 5,
- 2 degrees - medium strength - a deviation of 5 to 30.
- 3 degrees \* strong - the researcher loses balance and falls.

Vegetative response of 3 degrees:

- 1 degree - weak (blanching of the face, nausea).
- 2 degrees - medium strength (cold sweat, nausea).
- 3 degrees-violent reaction (vomiting, fainting, nervous shock)