MINISTRY OF HEALTH OF UKRAINE

ODESANATIONALMEDICALUNIVERSITY

Department of OTORHINOLARYNGOLOGY

CONFIRMED by

Acting vice-rector for scientific and pedagogical work

Eduard BURIACHKIVSKYI

September 1st, 2023

WORKING PROGRAM IN THE ELECTIVEDISCIPLINE « ALLERGIC LESIONS OF UPPER RESPIRATORY TRACT AND EAR»

Level of higher education: second (master's degree)

Field of knowledge: 22 «Health care»

Specialty: 222 «Medicine»

Educational and professional program: Medicine

2023

The working program is compiled on the basis of the educational and professional program "Medicine" for the training of specialists of the second (master's) level of higher education in the specialty 222 "Medicine" of the field of knowledge 22 "Health care", approved by the Academic Council of ONMedU (minutes No. 8 dated 29/06/2023).

Authors:
Head of the Department, PhD in Otorhinolaryngology, Professor SergiyPukhlik
Associate Professor of the Department, PhD in Otorhinolaryngology, Associate Professor Irina Dedikova

The working program is approved at the meeting of the Department of Otorhinolaryngology
Minutes No. 1 dated 30/08/2023.

Head of the department _____ ***SergiyPukhlik***

Approved by the guarantor of
the educational and professional program _____ Valeriia MARICHEREDA

Approved by the subject-cycle methodological commission for surgery of ONMedU
Minutes No. 1 dated 30/08/2023.

Head of the subject-cycle methodological commission for surgery of ONMedU

_____ Vasil Mishchenko

Revised and approved at the meeting of the Department of Otorhinolaryngology
Minutes No. 1 dated 28/08/2024

Head of the department _____ ***Sergiy Pukhlik***

Revised and approved at the meeting of the Department of Otorhinolaryngology
Minutes No. __ dated __/__/20__.

Head of the department _____ ***Sergiy Pukhlik***

1. Description of the discipline:

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the discipline
Total number: Credits of ECTS: 3 Hours: 90 Content modules: 4	Field of knowledge 22 «Health care» Specialty 222 «Medicine» Level of higher education second (master's degree)	*Full-time (day) education* *Electivediscipline*
		Course: 6
		Semester:XI
		Lectures (0 hours)
		Seminars(0 hours)
		Practical classes(30 hours)
		Laboratories(0 hours)
		Independent work (60hours)
		including individual tasks (0hours)
		Form of final control – Credit

2. The purpose and tasks of the educational discipline,competencies, program learning outcomes

Purpose: Acquisition by the student of higher education of knowledge and formation of elements of professional competences in the field of modern methods of hearing research and hearing prosthesis and improvement of skills and competences acquired during the study of previous disciplines.

Task:

1. Formation of skills and abilities: from differential diagnosis, the allergic lesions of upper respiratory tract and ear.
2. Improving the skills of substantiating a clinical diagnosis, drawing up a plan for laboratory and instrumental research,
3. Mastering the ability to determine the tactics of emergency care, treatment and rehabilitation of theallergic lesions of upper respiratory tract and ear.

The process of studying the discipline is aimed at forming elements of followingcompetencies:
Integral competence (level 7) according to the requirements of the NRC. The ability to solve typical and complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.

General competences according to the requirements of the NRK
GC1. Ability to abstract thinking, analysis and synthesis
GC3. Ability to apply knowledge in practical situations
GC4. Knowledge and understanding of the subject area and understanding of professional activity
GC5. Ability to adapt and act in a new situation
GC6. Ability to make informed decisions
GC7. Ability to work in a team
GC10. Ability to use information and communication technologies

Special (professional, subject) competences
SC1. Ability to collect medical information about the patient and analyze clinical data
SC2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results
SC3. Ability to establish a preliminary and clinical diagnosis of the disease
SC4. The ability to determine the necessary regime of work and rest in the treatment and prevention of diseases
SC5. The ability to determine the nature of nutrition in the treatment and prevention of diseases

SC6. Ability to determine the principles and nature of treatment and prevention of diseases
SC7. Ability to diagnose emergency conditions
SC8. Ability to determine tactics and provide emergency medical care
help
SC9. Ability to carry out medical evacuation measures
SC11. Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility, including early intervention systems
SC17. The ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population
SC25. Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results
SC26. The ability to determine the management tactics of persons subject to dispensary supervision
SC27. The ability to diagnose and determine the management tactics of patients with extrapulmonary and widespread forms of tuberculosis, including co-infection of TB/HIV with a chemoresistant course

Program learning outcomes (PLO):

PLO1. Have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.
PLO2. Understanding and knowledge of fundamental and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.
PLO3. Specialized conceptual knowledge that includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems, including the system of early intervention.
PLO4. Identify and identify leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2).
PLO5. Collect complaints, anamnesis of life and diseases, assess the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information regarding the diagnosis (according to list 4), taking into account the age of the patient.
PLO6. To establish the final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis, observing the relevant ethical and legal norms, under the control of the head physician in the conditions of the health care institution (according to the list 2).
PLO7. Assign and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4), patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).
PLO8. Determine the main clinical syndrome or symptom that determines the severity of the condition of the victim/injured person (according to list 3) by making a reasoned decision about the person's condition under any circumstances (in the conditions of a health care facility, outside its borders), including in conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.
PLO9. Determine the nature and principles of treatment (conservative, operative) of patients with diseases (according to list 2), taking into account the age of the patient, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation, including in field conditions, on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes, in case of the need to expand the standard scheme, be able to substantiate personalized recommendations under the control of the head physician in the conditions of a medical institution.
PLO10. Determine the necessary mode of work, rest and nutrition on the basis of the final clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.
PLO14. Determine tactics and provide emergency medical care in emergency situations (according to list 3) in limited time conditions according to existing clinical protocols and standards of treatment.

PLO17. Perform medical manipulations (according to list 5) in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.
PLO18. To determine the state of functioning and limitations of a person's vital activities and the duration of incapacity for work with the preparation of relevant documents, in the conditions of a health care institution, based on data about the disease and its course, peculiarities of a person's professional activity, etc. Maintain medical documentation regarding the patient and the contingent of the population on the basis of regulatory documents.
PLO21. Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.
PLO32. The ability to diagnose and determine the management tactics of patients with extrapulmonary and common forms of tuberculosis, including co-infection of TB/HIV with a chemoresistant course.

As a result of studying the discipline, the student has to

Know: Etiology, pathogenesis, clinic, diagnosis, differentialdiagnosis, treatment, preventionofallergicdiseasesoftheupperrespiratorytractandear.

Be able:

- Communicate with patients, collect complaints, life anamnesis and diseases.
- Assess the state of the ENT organs in normal conditions and in various types of allergic pathology.
- Conduct clinical examination of ENT patients with allergic pathology according to standard methods.
- Analyze the results of laboratory, functional and instrumental research.
- Carry out differential diagnosis and substantiate the clinical diagnosis.
- Determine tactics and provide emergency medical care in emergency situations.
- To determine the nature and principles of providing assistance to patients on the basis of a preliminary clinical diagnosis, observing relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.
- Keep medical documentation in case of hearing impairment.

3. The content of the educational discipline

Content module 1.Basics of allergology.Research methods for allergic diseases of the upper respiratory tract and ear.

Topic 1. Mechanismsofdevelopmentofallergicreactions. Typesofallergicreactions. Allergymediators.Studentsacquirepracticalskills: useof a foreheadreflector, foreheadilluminatorandconductofotoscopy, anteriorrhinoscopy, epi-, meso- andhypopharyngoscopy, indirectlaryngoscopy, examinationofthepatencyoftheauditorytube, determinationofhearingacuity, determinationofrespiratoryandolfactoryfunctionsofthenose, takingswabsfromthenose, pharynxforbacteriologicalandcytologicalexamination.General clinical, instrumental and radiation research methods. Fibroscopy and endoscopy of the external auditory canal, nose, paranasal sinuses and nasopharynx, pharynx, larynx, larynx.

Topic 2. Allergensandfactorscontributingtothedevelopmentofallergies.Endoallergens and exoallergens. Non-infectious allergens: pollen, household, food, epidermal, insect, medicinal, industrial. Infectious allergens: bacterial, viral, fungal, helminth allergens. Stages of realization of genetic predisposition.Environmental factors.

Topic 3.Methods ofresearchoftheear, nose, paranasalsinuses, pharynx, larynx, trachea. Endoscopicmethodsofresearchof ENT organs.Students acquire practical skills: use of a forehead reflector, forehead illuminator and conduct of otoscopy, anterior rhinoscopy, epi-, meso- and hypopharyngoscopy, indirect laryngoscopy, examination of the patency of the auditory tube, determination of hearing acuity, determination of respiratory and olfactory functions of the nose, taking swabs from the nose, pharynx for bacteriological and cytological examination.

General clinical, instrumental and radiation research methods. Fibroscopy and endoscopy of the external auditory canal, nose, paranasal sinuses and nasopharynx, pharynx, larynx, larynx.

Topic 4.Semiotics, generallaboratoryandspecificallergydiagnosisofallergicdiseasesoftheupperrespiratorytractandear. Allergologicalanamnesiscollection. Clinicalandlaboratoryresearch. Allergologicalskintests: skin, scarification, pricktest, intradermal. Indicationsandcontraindicationsforskintests. Provocationtests: nasal, inhalation, sublingual, elimination, leukocytopenic. Immuno-laboratoryexamination: radioallergosorbent, immunoenzymaticanalysisforthedeterminationofspecificimmunoglobulin E, molecular ALEX test.

Content module 2.Principles of treatment of allergic diseases of the upper respiratory tract and ear.

Topic 5.Elimination ofallergens. Elimination of contact with causative allergens. Hygiene of the environment, home and patient.Patient education.Vacation planning.Use of acaricides.Nasal shower.

Topic 6.Pharmacotherapy ofallergicdiseasesoftheupperrespiratorytractandear. Groups of antiallergic drugs. Mechanisms of action.Local and systemic antiallergic agents.Side effects.Gradual approach of pharmacotherapy. The choice of treatment tactics depends on the symptoms, degree of severity, comorbid conditions and complications of the allergic disease. Combined pharmacotherapy.

Topic 7.Specific immunotherapyofallergicdiseasesoftheupperrespiratorytractandear. Mechanisms of action of specific immunotherapy. Methods of use.Indication.Restrictions and contraindications. Pre-season, seasonal, year-round SIT. Methods and conditions of accelerated SIT. Methods of introducing therapeutic allergens.General and local adverse reactions.Expected results and their control.

Content module 3.Allergological diseases of the upper respiratory tract and ears.

Topic 8.Atopic dermatitisoftheskinoftheexternalauditorycanal. Clinical and pathogenetic variants of atopic deamatitis of the skin of the external auditory canal. Trigger factors. Histaminoliberators.Mandatory and additional diagnostic criteria.Laboratory tests.Differential diagnosis with skin manifestations of infection, diseases of the immune system, metabolic disorders, syndromes similar to dermatoses.Staged treatment. Rules for skin care of the external auditory canal. Prevention of exacerbations.

Topic 9.Allergicnasopharyngitis. Secretoryotitis. Stages and mechanism of development of allergic nasopharyngitis. Modern diagnostic algorithm.Endoscopic signs.Elimination measures.Gradual use of pathogenetically determined pharmacotherapy.Age characteristics of specific allergy diagnosis and immunotherapy of allergic nasopharyngitis.Pathophysiology and clinical course of secretory otitis.Diagnostic criteria.Conservative methods of treatment of secretory otitis against the background of allergic diseases of the upper respiratory tract.Surgical varnishing of secretory otitis. Forecast. Forecast.

Topic 10.Allergicrhinitis. Classification. Complication. Treatmentandpharmacologicalcontrol. Causes of intermittent and persistent allergic rhinitis. Mechanism of development and stage.Classification by type of reaction, morphological changes, clinical course, duration of allergen exposure, depending on symptoms and severity.Clinical symptoms and functional disorders depending on the biochemical mediator.Typical symptoms.Diagnostic criteria.Allergodiagnosis.Differential diagnosis between seasonal and year-round allergic rhinitis.Differential diagnosis between allergic, infectious and vasomotor rhinitis. Complications: nonspecific polysensitization, polyallergy, polypousrhinosinusitis, bronchial asthma. Elimination measures.Principles of pharmacotherapy.Allergen-specific therapy.Treatment prospects.

Topic 11.Chronic rhinosinusitiswithpolyps. Multifactorial, allergic, infectious-allergic, autoimmune theories of etiopathogenesis of polypousrhinosinusitis. Systemic, recurrent genetically determined polyps, chronic polyposis-purulent rhinosinusitis (neutrophil polyps), local pathology in the osteomeatal complex (antrochoanal polyp), chronic infectious-allergic

rhinosinusitis, aspirin-induced nasal polyps. Edema eosinophilic nasal polyp.Fibro-inflammatory polyp.Glandular polyp.Polyp with atypical stroma.Stammberger's classification.Obligatory and additional methods of diagnosis of polyposis rhinosinusitis.Medical and surgical treatment.

Topic 12.Aspirin triad.The theory of pathogenesis. Manifestations and clinical course.Signs and diagnosis.Peculiarities of diet and pharmacological control.Aspirin desensitization.Indications for surgical treatment. Forecast.

Topic 13.Pseudoallergic conditionsin ENT practice.Syndrome of low tolerance to histamine. Caused by a decrease in the activity of diamine oxidase.Clinical manifestations.Differential diagnosis.Features of the diet.Treatment.Mechanisms of sensitization in parasitic infections.Clinical manifestations of parasitic sensitization of the upper respiratory tract.Differential diagnosis.Tactics of treatment.

Content module 4.Emergency conditions in allergic diseases of the upper respiratory tract and ear.

Topic 14.Angioedema ofthelarynx.Etiopathogenesis of Quincke's edema of the larynx. Reasons.Diagnostic criteria.Stages of laryngeal stenosis.Acquired and hereditary bradykinin-induced laryngeal angioedema.Typical hereditary bradykinin-induced angioedema of the larynx.Features of diagnosis and course.Short-term prevention.Long-term prevention.Emergency aid. Medical destenosis. Treatment tactics of the 3rd and 4th stages of stenosis in a modern aspect.Conicotomy.Criconicotomy.Tracheostomy.

Topic 15.Drug allergyinotorhinolaryngology. Lyell'ssyndrome. Anaphylacticshock.Classification of side effects of drugs. Stages of drug allergy development.Concept of metabolic biotransformation of drugs.Risk factors of drug allergy.Clinical classification of allergic reactions to drugs.Diagnosis of drug allergy.Prevention of drug allergy. Lyell's syndrome: clinical picture, differential diagnosis, treatment. Pathophysiological mechanisms of anaphylactic shock.Mechanisms of degranulation of basophils.Clinical picture of anaphylactic shock.Treatment.

Credit. It is evaluated on a two-point scale: the grade "credited" is given to a higher education applicant who has completed the curriculum of the discipline, has no academic debt; the level of competence is high (creative); the grade "failed" is given to a student of higher education who has not completed the curriculum of the discipline, has academic debt (average grade below 3.0 and/or missed classes); the level of competence is low (receptive-productive).

4. The structure of the educational discipline

Topic	Hours					
	Total	including				
		lectures	Seminars	Practical	Laboratory	ISW
Content module 1. Basics of allergology. Research methods for allergic diseases of the upper respiratory tract and ear.						
Topic 1. Mechanismsofdevelopmentofallergicreactions. Typesofallergicreactions. Allergymediators.		0	0	2	0	
Topic 2. Allergensandfactorscontributingtothedevelopmentofallergies.	6	0	0	2	0	4
Topic 3.Methodsofresearchoftheear, nose, paranasalsinuses, pharynx, larynx, trachea. Endoscopicmethodsofresearchof ENT organs.	6	0	0	2	0	4
Topic 4.Semiotics, generallaboratoryandspecificallergydiagnosisofallergic diseasesoftheupperrespiratorytractandear.	6	0	0	2	0	4
Content module 2.Principles of treatment of allergic diseases of the upper respiratory tract and ear.						

Topic 5.Elimination ofallergens.		0	0	2	0	
Topic6.Pharmacotherapyofallergicdiseasesoftheupperr espiratorytractandear.	6	0	0	2	0	4
Topic 7.Specificimmunotherapyofallergicdiseasesoftheupper respiratorytractandear.	6	0	0	2	0	4
Content module 3. Allergological diseases of the upper respiratory tract and ears.						
Topic 8.Atopicdermatitisoftheskinoftheexternalauditorycanal .		0	0	2	0	
Topic9.Allergicnasopharyngitis. Secretoryotitis.	6	0	0	2	0	4
Topic 10.Allergicrhinitis. Classification. Complication. Treatmentandpharmacologicalcontrol.	6	0	0	2	0	4
Topic 11.Chronicrhinosinusitiswithpolyps.	6	0	0	2	0	4
Topic 12.Aspirintriad.	6	0	0	2	0	4
Topic 13.Pseudoallergicconditionsin ENT practice.	6	0	0	2	0	4
Content module 4.Emergency conditions in allergic diseases of the upper respiratory tract and ear.						
Topic 14.Angioedemaofthelarynx.		0	0	2	0	
Topic 15.Drugallergyinotorhinolaryngology. Lyell'ssyndrome. Anaphylacticshock.	6	0	0	2	0	4
Credit	0	0	0	0	0	0
Individual task	0	0	0	0	0	0
Total	6	0	0	30	0	60

5. Themes of lectures / seminars / practical classes/ laboratories

5.1. Themes of lectures -lectures are not provided

5.2. Themes of seminars-Seminars are not provided.

5.3. Themes of practical classes

№	TOPIC	Hours
1.	Mechanismsofdevelopmentofallergicreactions. Typesofallergicreactions. Allergymediators.	2
2.	Allergensandfactorscontributingtothedevelopmentofallergies.	2
3	Methodsofresearchoftheear, nose, paranasalsinuses, pharynx, larynx, trachea. Endoscopicmethodsofresearchof ENT organs.	2
4	Semiotics, generallaboratoryandspecificallergydiagnosisofallergicdiseasesofthe upperrespiratorytractandear.	2
5	Topic 5.Elimination ofallergens.	2
6	Pharmacotherapyofallergicdiseasesoftheupperrespiratorytractandear.	2
7	Specificimmunotherapyofallergicdiseasesoftheupperrespiratorytracta ndear.	2
8	Atopicdermatitisoftheskinoftheexternalauditorycanal.	2
9	Allergicnasopharyngitis. Secretoryotitis.	2

10	Allergicrhinitis. Classification. Complication. Treatmentandpharmacologicalcontrol.	2
11	Chronicrhinosinusitiswithpolyps.	2
12	Aspirintriad.	2
13	Pseudoallergicconditionsin ENT practice.	2
14	Angioedemaofthelarynx.	2
15	Drugallergyinotorhinolaryngology. Lyell'ssyndrome. Anaphylacticshock.	2
	Total hours	

5.4. Themes of laboratories Laboratoriesare not provided.

6. Independent work of the student

No.	Topic	Hours
1.	Topic 1-15. Preparation for practical classes	4
	Total	**60**

7. Teaching methods

Practical classes: conversation, solving clinical situational problems, practicing patient examination skills, practicing skills, instructing and practicing skills on simulation dummies, training exercises on differential diagnosis of the allergic lesions of upper respiratory tract and ear.

Independent work: independent work with recommended basic and additional literature, with electronic information resources, independent mastering of allergic lesions of upper respiratory tract and ear.

8. Forms of control and assessment methods

(including criteria for evaluating learning outcomes)

Current control: oral survey, testing, assessment of class activity.

Final control: Credit. It is evaluated on a two-point scale: the grade "credited" is given to a higher education applicant who has completed the curriculum of the discipline, has no academic debt; the level of competence is high (creative); the grade "failed" is given to a student of higher education who has not completed the curriculum of the discipline, has academic debt (average grade below 3.0 and/or missed classes); the level of competence is low (receptive-productive).

Evaluation of the current educational activity in a practical session:

1. Evaluation of theoretical knowledge on the subject of the lesson:
- methods: survey, solving a situational clinical problem
- maximum score – 5, minimum score – 3, unsatisfactory score – 2.

The grade for one practical lesson is the arithmetic average of all components and can only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

Criteria of ongoing assessment at the practical class

Score	Assessment criterion
Excellent «5»	The student is fluent in the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates practical skills during the examination of a patient and the interpretation of clinical, laboratory and instrumental research data, expresses his opinion on the topic of the class, demonstrates clinical thinking.
Good «4»	The student has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient and the interpretation of clinical, laboratory and instrumental research data with some errors, expresses his opinion on the topic of the class, demonstrates clinical thinking.
Satisfactory «3»	The student does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem,

	demonstrates practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental research data with significant errors.
Unsatisfactory «2»	The student does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental research data.

The student is admitted to the differentiated assessment on the condition that the requirements of the educational program are met and if he received at least 3.00 points for the current educational activity.

9. Distribution of points, obtained by the student

The grade for the discipline consists of 50% of the grade for the current academic performance.

The average grade in the discipline is converted to the national grade and converted to points on a multi-point scale (200-point scale).

Conversion of traditional assessment into 200-point is carried out by the information and technical department of ONMedU by the special program by the formula:

Average score (current academic performance) x 40.

Conversion table of traditional to multi-point

National score for the discipline	The sum of scores for the discipline
Excellent («5»)	185 – 200
Good («4»)	151 – 184
Satisfactory («3»)	120 – 150
Unsatisfactory («2»)	Less than 120

According to the ECTS rating scale, students' achievements in educational discipline, who study on the same course of one specialty, according to their scores, are assessed by means of rank, namely:

Conversion of the traditional evaluation and ECTS scores

Score on the ECTS scale	Statistical indicator
A	The best 10% students
B	Next 25% students
C	Next 30% students
D	Next 25% students
E	Next 10% students

10. Methodological support

- Working program in the discipline
- Syllabus
- Methodological recommendations for the practical classes in the discipline
- Methodological recommendations for the individual work of students
- Multimedia presentations
- Situational tasks (including calculation)
-

Educational and methodical literature:

1. IlariaPuxeddu, PaolaMigliorini. Immune Rebalancing, 2016
2. Umit Sahiner, Cezmi A. Akdis. Allergy Essentials (Second Edition), 2022
3. Stephanie.T. Yerkovich, John.W. Upham. Allergens and Respiratory Pollutants, 2011
4. Hans Oettgen, David H Broide. Allergy (Fourth Edition), 2012
5.P.W.Flint, B.H.Haughey, V.J.Lund, K.T.Robbins, J.R.Thomas, M.M.Lesperance, H.W.Francis. Cummings Otolaryngology: Head and Neck Surgery // Format Hardback, 2020. – 3568

11. Questions for the final control

Content module 1.Basics of allergology.Research methods for allergic diseases of the upper respiratory tract and ear.

1. Reasons for increasing the frequency of allergic diseases.
2. Stages of a direct allergic reaction.
3. Types of hypersensitivity reactions.
4. Mechanisms of histamine release.
5. Allergens. Definition. Classification.
6. The concept of cross-allergy.
7. Environmental factors affecting the state of the human immune system.
8. Periods of influence of harmful environmental factors on the state of the immune system.
9. Research methods of ENT organs: overview.
10. Methods of research of ENT organs: instrumental methods.
11. Research methods of ENT organs: laboratory methods.
12. Methods of research of ENT organs: radiation methods.
13. Stages of diagnosis of allergic diseases of the upper respiratory tract and ear. Allergological anamnesis collection.
14. Clinical and laboratory examination for allergic diseases of the upper respiratory tract and ear.
15. Allergological skin tests for allergic diseases of the upper respiratory tract and ear.
16. Provocative tests for allergic diseases of the upper respiratory tract and ear.
17. Immuno-laboratory research in allergic diseases of the upper respiratory tract and ear.

Content module 2.Principles of treatment of allergic diseases of the upper respiratory tract and ear.

18. Ways to eliminate allergens.
19. Local antihistamine therapy for allergic diseases of the upper respiratory tract and ear.
20. Системна антигістамінна терапія алергічних захворювань верхніх дихальних шляхів та вуха.
21. Topical therapy with glucocorticosteroid drugs for allergic diseases of the upper respiratory tract and ear.
22. Systemic therapy with glucocorticosteroid drugs for allergic diseases of the upper respiratory tract and ear.
23. Antileukotriene drugs in the treatment of allergic diseases of the upper respiratory tract and ear.
24. Mast cell membrane stabilizers in the treatment of allergic diseases of the upper respiratory tract and ear.
25. Elimination therapy in the treatment of allergic diseases of the upper respiratory tract and ear.
26. Mechanisms, purpose and benefits of specific immunotherapy in the treatment of allergic diseases of the upper respiratory tract and ear.
27. Methods of introducing allergens for specific immunotherapy of allergic diseases of the upper respiratory tract and ear. Indications and contraindications.

Content module 3.Allergological diseases of the upper respiratory tract and ears.

28. Diagnosis of atopic dermatitis of the skin of the external auditory canal.
29. Treatment of atopic dermatitis of the skin of the external auditory canal.
30. Mechanisms of development and diagnosis of allergic nasopharyngitis.
31. Methods of treatment of allergic rhinopharyngitis.
32. Pathophysiology and clinical course of secretory otitis against the background of allergic inflammation.
33. Methods of treatment of secretory otitis with an allergic component.
34. Classification of allergic rhinitis. Causative allergens.
35. Clinical manifestations and diagnosis of allergic rhinitis.

36. Differential diagnosis of year-round allergic and vasomotor rhinitis.
37. Degrees of severity of allergic rhinitis and complications.
38. Treatment of allergic rhinitis.
39. Classification of rhinosinusitis. Types of intranasal polyps.
40. Diagnosis and stages of spread.
41. Methods of treatment of rhinosinusitis with eosinophilic polyps.
42. The theory of the pathogenesis of the aspirin triad.
43. Features of the clinical course of the aspirin triad.
44. Treatment of aspirin triad.
45. Immune response in helminthiasis.
46. Manifestations from the side of the upper respiratory tract in case of parasitic sensitization
47. Syndrome of low tolerance to histamine. Methods of correction.

Content module 4.Emergency conditions in allergic diseases of the upper respiratory tract and ear.

48. Types of angioedema. Characteristics of angioedema of the larynx induced by mast cell mediators.
49. Characteristics of angioneuroticbradykinin-induced laryngeal edema. Long-term and short-term prevention.
50. Stages of laryngeal stenosis, principles of treatment (medication, prolonged intubation, tracheotomy).
51. Tracheostomy: indications, its options, performance technique.
52. Classification of allergic reactions to medicinal products. Factors contributing to the development of direct allergic reactions to medicinal products
53. General principles of drug allergy treatment.
54. Pathophysiological mechanisms of anaphylactic shock. The most frequent allergenic factors of development.
55. Clinical picture of anaphylactic shock.
56. Treatment of anaphylactic shock.
57. Lyell's syndrome. Reasons. Differential diagnosis. Treatment.

12. Recommended literature

Basic:

1. Y.Mitin, Y.Deyeva, Y.Gomza, V. Didkovskyi etc. Otorhinolaryngology// Medicine, 2018. – 264p.
2. Finkelman F.D., Khodun M.V., Streit R. Ige-independent systemic human anaphylaxis. J Allergy ClinImmunol. (2016) 137:1674–80.
3. Eguiluz-Gracia I., Testera-Montes A., Gonzalez M., Perez-Sanchez N., Arisa A., Salas M. et al. Safety and reproducibility of nasal allergen provocation. Allergy. (2019) 74:1125–34. doi: 10.1111/vse.13728
4. Jutel M., Agache I., Bonyny S., Berks A.V. , Calderon M., Canonica W, et al. International consensus on immunotherapy with allergens II: mechanisms, standardization and pharmacoeconomics. J Allergy ClinImmunol 2016; 137: 358 – 368.
5. Bousquet J, Heinzerling L, Bachert C, Papadopoulos NG, Bousquet PJ, Burney PG, et al. A practical guide to skin prick tests for allergies to aeroallergens. Allergy. (2012) 67:18–24. doi: 10.1111/j.1398-9995.2011.02728.x
6. Fokkens WJ, Lund VJ, Hopkins C, Hellings PW, Kern R, Reitsma S. European position on rhinosinusitis and nasal polyps. Rhinology. (2020) 58 (Suppl. S29): 1–464. doi: 10.4193/Rhin20.600

Additional:

7. P.W.Flint, B.H.Haughey, V.J.Lund, K.T.Robbins, J.R.Thomas, M.M.Lesperance, H.W.Francis. Cummings Otolaryngology: Head and Neck Surgery // Format Hardback, 2020. – 3568
8. Z.Mu, J.Fang. Practical Otorhinolaryngology, Head and Neck Surgery: Diagnosis and Treatment// Hardback, 2020. - 314 p.
9. S.N.Kumar.Clinical Cases In Otolaryngology// Paperback, 2016. – 260p.
10. R.Pasha, J.S.Golub. Otolaryngology-Head and Neck Surgery : Clinical Reference Guid// Paperback, 2017. - 800 p.
11. Hossenbakkus L., Linton S., Harvey S., Ellis A.K. On the way to the final treatment of allergic rhinitis: the best use of new and proven treatment methods. Allergy Asthma KlinImmunol. (2020) 16:1–17. doi: 10.1186/s13223-020-00436-y
12. Du K, Qing H, Zheng M, Wang X, Zhang L. Intranasal antihistamines are superior to oral H1 antihistamines as adjunctive therapy to intranasal corticosteroids for the treatment of allergic rhinitis. Ann Allergy Asthma Immunol. (2020) 125: 589–96.e3. doi: 10.1016/j.anai.2020.06.038
13. Seresirikachorn K, Chitsuthipakorn W, Kanjanawasee D, Khattiyawittayakun L, Snidvongs K. Adding a leukotriene receptor antagonist to H1 antihistamines is effective for the treatment of allergic rhinitis: a systematic review and metaanalysis. Am J RhinolAllerg. (2019) 33: 591–600. DOI: 10.1177/1945892419844459

13. Electronic information resources

1. World Health Organization. URL: www.who.int/ru/index.html.
2. European Regional Office of the World Health Organization. URL: www.euro.who.int.
3. www.ama-assn.org – American Medical Association
4. www.dec.gov.ua/mtd/home/ - State Expert Center of the Ministry of Health of Ukraine
5. http://bma.org.uk– British Medical Association
6. www.gmc-uk.org- *General Medical Council* (*GMC*)
7. www.bundesaerztekammer.de – German Medical Association