



**NUTRITION IN DISEASE.  
CLINICAL NUTRITION PRACTICE IN CHRONIC OBSTRUCTIVE PULMONARY  
DISEASES (Module 3. Nutrition in Disease)**

**Course overview**

**UNIT NAME: CLINICAL NUTRITION PRACTICE IN CHRONIC OBSTRUCTIVE  
PULMONARY DISEASES**

**WELCOME TO COURSE CLINICAL NUTRITION PRACTICE IN CHRONIC  
OBSTRUCTIVE PULMONARY DISEASES**

This course is designed to equip students with the knowledge and practical skills required to provide evidence-based clinical nutrition support to individuals with Chronic Obstructive Pulmonary Diseases (COPD). Each class will highlight the most important disorders in COPD and nutritional methods for their correction. Students will gain a comprehensive understanding of the role of nutrition in managing COPD, learning to tailor dietary interventions to meet the specific needs of patients with this respiratory condition. We welcome students who are interested in COPD and nutrition with appropriate pre-requisite completion.

**Semester:**

**Lecturer:**

Name	Position	Institute	Contact information	Consulting hours
Dr. Lyazat Ibrayeva	Professor of the Department of Internal Medicine	Karaganda Medical University, Kazakhstan	Phone number: +7 747 151 634 libraeva@qmu.kz	Wednesday and Friday from 14.00 to 16.00 hours
Dr. Rana Salieva	Senior lecturer of the department clinical studies 1	Osh State University	Phone number: +996505 664487 ranasalieva@gmail.com	Wednesday and Friday from 14.00 to 16.00 hours
Dr. Elnora Abduganieva	Lecturer of department clinical medicine	Tashkent Medical Academy	Phone number: +998 93 505 00 99 E.abduganieva@gmail.com	Wednesday and Friday from 14:00 to 16:00

**Type:** Elective      **Semester load:** 25 hours.      **ECTS:** 1      **Groups:**  
1 unit = 60 min  
25 unit =25 hours

**Prerequisites:** Nutrition Biochemistry or equivalent; Internal diseases and their treatment or equivalent.

**Course Communications:**

We appreciate hearing questions from students.

**Office Hours:** online/offline, according to schedule

Any questions about homework, cases or other class related issues contact teachers via e-mail or MOODLE

**Goals of the course:**

The goal of the course is to obtain the necessary knowledge to determine nutritional support recommendations for patients with COPD in accordance with specific medical needs in clinical practice.

**At the completion of the course, students should be able to:**

- ✓ describe the guidelines of nutritional therapy for COPD;
- ✓ describe adaptable nutrition plans to meet specific medical needs based on the preferences of patients with COPD;
- ✓ explain calculate recommended daily intake levels for macronutrients (proteins, carbohydrates, fats) and microelements (vitamins, minerals) in COPD patients, considering factors such as age, disease severity, comorbidities;
- ✓ have skills to develop a nutrition recommendation to correct excess/deficit weight, muscle atrophy, energy deficiency in COPD patients and to determine the indications, priorities and effectiveness of oral and enteral nutrition for patients with COPD.

The contents are to be consolidated by means of problem-based learning (case examples)

**Schedule:**

<b>Unit number: 12</b> (12 hours)  (1 unit = 60 min.)	<b>Topic</b>	<b>Homework &amp; deadlines</b> (13 hours)
3 units Date xx	<b>Unit Topic:</b> Dietary Strategies for COPD and Nutritional Supplements in COPD. Weight Management in COPD <b>Learning Objectives:</b> Develop effective dietary recommendations tailored to individuals with COPD to optimize their nutritional intake and overall well-being. Identify and address common dietary challenges faced by COPD patients, including energy-dense diets, macronutrient composition, protein portions and meal frequency. Create meal plans that accommodate dietary restrictions and limitations commonly experienced by COPD patients.	<b>Homework</b> (4 hours) Forum question about lesson content Case study with tasks
3 units Date xx	<b>Unit Topic:</b> The role of macronutrients and micronutrients in COPD <b>Learning Objectives:</b> Recognize the importance of nutrition in the management of COPD and its impact on patient outcomes and quality of life. Define macronutrients (carbohydrates, proteins, and fats) and micronutrients (vitamins and minerals), and explain their distinct roles in	<b>Homework</b> (4 hours) Forum question about lesson content Case study with test question

	<p>maintaining health and supporting individuals with COPD.</p> <p>Evaluate the importance of micronutrients in immune function, antioxidant defenses, and other critical processes that impact the health of individuals with COPD.</p> <p>Identify common nutritional deficiencies in COPD patients, including vitamin D, vitamin C, and certain minerals, and understand their implications.</p> <p>Nutritional correction of hyperhomocysteinemia in patients with COPD</p> <p>Protein: requirement (calculation), protein portions, recommendation of supplementation</p>	
<p>3 units Date xx</p>	<p><b>Unit Topic:</b> Correction of diet and nutrition for some comorbid conditions in COPD.</p> <p><b>Learning Objectives:</b> Develop dietary plans for comorbid conditions commonly associated with COPD. Explain how the diet plan may change depending on the comorbid disease in patient with COPD COPD+Arterial hypertension</p>	<p><b>Homework</b> (3 hours) Quiz Forum question about lesson content Provide feedback with answers to questions on an example of a nutrition plan for a patient with comorbidity of COPD and arterial hypertension</p>
<p>3 unit Date xx</p>	<p><b>Unit Topic:</b> Patient Education and Counseling. Effective Communication with COPD.</p> <p><b>Learning Objectives:</b> Recognize the critical role of patient education in the management of Chronic Obstructive Pulmonary Disease (COPD) and how it contributes to improving patient outcomes and self-management.</p>	<p><b>Homework</b> (2 hours) Forum question about lesson content Tests question</p>

**Previous knowledge required:**

Basics of: physiology, biochemistry, pathology, nutritional physiology, basic knowledge of dietetics

**Learning methods:**

Method: Please tick as appropriate and describe	
<input checked="" type="checkbox"/> Lecture	
<input type="checkbox"/> Exercises	
<input type="checkbox"/> Survey in institutions	
<input type="checkbox"/> Street survey	
<input type="checkbox"/> Excursion	
<input checked="" type="checkbox"/> Presentation	
<input type="checkbox"/> Seminar paper	
<input type="checkbox"/> Project work	
<input checked="" type="checkbox"/> Group work	Case studies
<input checked="" type="checkbox"/> Other: Videos	Overview in Nutrition Therapy in COPD;

**Grading:**

Assessment:		Weighting in %
1	Homework assignments	10% (Answers to questions)
2	Collaboration	
3	Exercises	
4	Seminar paper	
5	Midterm exam	
6	Final written exam	
7	Final oral exam	
8	Presentation	40% Case Studies
9	Project work	50% Dietary plane feedback
10	Other	

Grade	In points	
1	Very good	92-100
2	Good	83-91
3	Satisfactory	74-82
4	Sufficient	66-73
5	Not sufficient	0-65

**Participation in course:**

Students are obliged to attend all courses - as long as they are not prevented by illness or other compelling reasons. In such cases, a written excuse must be sent to the course director, the program director and the secretary's office. In the case of foreseeable valid reasons, the course director and the program director must be informed in advance.

The existing attendance requirement is at least 80% per course. Failure to meet the attendance requirement is equivalent to a negative assessment of the course.

In order to be able to complete the course positively in spite of this, substitute work can be done in consultation with the head of the study program and the head of the course.

If the substitute work is not completed or if the substitute work is evaluated negatively, the first examination is considered to be the second examination. Should the examination also be assessed negatively, a board examination will follow.

Participation in the course will be assessed according to the professional basis of the individual contributions or questions.

Students are expected to arrive on time for the course. If, for reasons beyond their control, students are nevertheless late, they should enter the course room without disrupting the course or fellow students. Cell phones are to be turned off prior to the start of the course. The consumption of food during the course is not permitted.

**Literature:**

1. GLOBAL STRATEGY FOR PREVENTION, DIAGNOSIS AND MANAGEMENT OF

- COPD: 2023 Report. <https://goldcopd.org/2023-gold-report-2/>
2. Williams' Basic Nutrition & Diet Therapy, 16th Edition, Staci Nix McIntosh, 2021. 576 p.
  3. Krause and Mahan's Food and the Nutrition Care Process, 16th Edition, Janice L Raymond, 2022.
  4. Nutritional Foundations and Clinical Applications, 8th Edition, Michele Grodner, 2023.
  5. Anderson L, Banner J, Bostock B, et al. Managing malnutrition in COPD. 2nd edn. 2020. [www.malnutritionpathway.co.uk/copd](http://www.malnutritionpathway.co.uk/copd) (accessed 20 Jul 2021).
  6. Collins PF, Yang IA, Chang Y-C, Vaughan A. Nutritional support in chronic obstructive pulmonary disease (COPD): an evidence update. *J Thorac Dis.* 2019;**11**(Suppl 17):S2230–S2237.
  7. Schols AM, Ferreira IM, Franssen FM, et al. Nutritional assessment and therapy in COPD: a European Respiratory Society statement. *Eur Respir J.* 2014;**44**(6):1504–1520.
  8. National Institute for Health and Care Excellence. Chronic obstructive pulmonary disease in over 16s: diagnosis and management NG115. London: NICE; 2018. <https://www.nice.org.uk/guidance/ng115> (accessed 20 Jul 2021).
  9. R. Beijers, M. Steiner, A. Schols. The role of diet and nutrition in the management of COPD. *European Respiratory Review*. Published 7 June 2023. DOI:10.1183/16000617.0003-2023; Corpus ID: 259109119
  10. C. Hanson, E. Bowser, +1 author T. Piemonte. Chronic Obstructive Pulmonary Disease: A 2019 Evidence Analysis Center Evidence-Based Practice Guideline. *Journal of the Academy of Nutrition and Dietetics*. Published 17 February 2020. DOI:10.1016/j.jand.2019.12.001; Corpus ID: 211231382