

**Schedule of lectures on pathophysiology**  
**General Medicine study program**  
**3rd year, summer semester, academic year 2021/2022**

10.00 – 12.15 h

<b>Wk.</b>	<b>Date</b>	<b>Topic</b>	<b>Teacher</b>
1.	17.2.2022	<b>Disturbances of blood pressure regulation</b> Systemic arterial hypertension, mechanisms of development of primary and secondary hypertension, mechanisms of development of complications in subjects with arterial hypertension. Systemic arterial hypotension.	MUDr. Buday
2.	24.2.2022	<b>Ischemic heart disease</b> Mechanisms of development of ischemic heart disease, mechanisms of disturbances of electrophysiology and mechanical function of the heart caused by ischemia, atherosclerosis as the main pathogenic factor of ischemic heart disease, mechanisms of reperfusion injury	Prof. Plevková
3.	3.3.2022	<b>Pathophysiology of heart failure</b> Mechanisms leading to the onset and progression of heart failure, responsible for systolic and diastolic dysfunction of the heart, acute and chronic heart failure, right and left-side heart failure, mechanisms leading to the manifestation of heart failure	Prof. Tatár
4.	10.3.2022	<b>Pathomechanisms involved in the development of the most common symptoms and signs of cardiovascular diseases</b>	Prof. Péčová
5.	17.3.2022	<b>Disturbances of external ventilation</b> Lung ventilation and mechanisms involved in its disturbances – alveolar hyper- and hypoventilation; extrapulmonary and intrapulmonary mechanisms involved in lung ventilation disturbances, in the distribution of air in the lung, in the diffusion of gases across the alveolo-capillary membrane, in lung perfusion; in ventilation-perfusion ratio, consequences of lung ventilation disturbances for exchange of gases in the lung.	Doc. Brozmanová
6.	24.3.2022	<b>Pathophysiology of obstructive pulmonary diseases</b> Pathogenesis of bronchial asthma (BA) – pathogenesis, symptoms, and signs, pathomechanisms involved in the exchange of gases in the lung Chronic obstructive pulmonary disease (COPD) – pathogenesis; main mechanisms involved in disturbances of gas exchange in COPD.	Prof. Péčová
7.	31.3.2022	<b>Hypoxia, hyperoxia, respiratory failure</b> Causes and mechanisms involved in the development of main types of hypoxia; compensatory mechanisms influence of hypoxia on different organs and systems of the human body; hyperoxia – causes and mechanisms involved in the development of hyperoxia, main mechanisms responsible for the negative influence of hyperoxia on tissues. <b>Respiratory failure (RF)</b> Main groups of causes involved in RF development, main consequences of RF – hypoxaemia and hypercapnia; mechanisms responsible for the development of symptoms and signs in patients suffering from RF	Prof. Tatár
8.	7.4.2022	<b>Pathomechanisms of the most important symptoms and signs of respiratory diseases</b>	Prof. Péčová
9.	14.4.2022	<b>Disturbances of glomerular and tubular functions</b> Causes and mechanisms involved in the development of glomerular and tubular disturbances - their consequences for the inner	Prof. Péčová

		environment of the body; the decrease of glomerular filtration rate; glomerular and tubular proteinuria, glomerular haematuria; disturbances of tubular functions – diabetes insipidus, osmotic diuresis, acidification of urine; nephrotic syndrome (NS) – mechanisms involved in the development of NS; main symptoms and signs related to disturbances of glomeruli and tubuli. A-B balance, disturbances of the nervous system, hematopoietic system and other systems of the human body.	
10.	21.4.2022	<b>Pathophysiology of acute and chronic renal failure</b> Causes of acute and chronic renal failure (RF), disturbances in homeostasis in RF – uremic syndrome, mechanisms responsible for multiorgan dysfunction in acute and chronic RF	Prof. Tatár
11.	28.4.2022	<b>Pathomechanisms of the most important symptoms and signs arising from renal diseases</b>	Prof. Péčová
12.	5.5.2022	<b>Pathophysiology of the gastrointestinal tract</b> Pathogenesis of gastric and duodenal ulcers, the pathophysiology of the small and large intestine	Prof. Plevková
13.	12.5.2022	<b>Pathophysiology of liver</b> Basic functions of the liver; hepatic insufficiency and its consequences - metabolic, hormonal, nerve, skin, others. Portal hypertension. Hepatopulmonary syndrome.	Prof. Plevková
14.	19.5.2022	<b>Disorders of the endocrine system</b> General effects of hormones; causes and mechanisms involved in the development of disturbances in hypothalamic-pituitary system, in thyroid function, in the function of the adrenal cortex, and in the function of the parathyroid gland; mechanisms involved in the development of symptoms and signs related to mentioned disturbances.	Prof. Péčová

Martin, 4.2.2022

prof. MUDr. Renata Péčová, PhD.  
Head of Department of Pathophysiology