



CHARLES UNIVERSITY – FIRST FACULTY OF MEDICINE  
AND  
GENERAL UNIVERSITY HOSPITAL  
**Institute of Medical Biochemistry  
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Announcement for Summer Term 2023/2024  
**1<sup>st</sup> year DENTISTRY**

## Revision Test

In the 10<sup>th</sup> week of the summer term the first year students of the dentistry program will take a revision test on the core metabolic pathways.

The test will focus on the basic metabolic pathways, namely the respiratory chain and oxidative phosphorylation, the citric acid cycle, oxidative decarboxylation, glycolysis, gluconeogenesis, synthesis and degradation of glycogen,  $\beta$ -oxidation and biosynthesis of fatty acids, origin and utilization of ketone bodies, and the general conversions of amino acids (transamination, oxidative deamination, urea cycle).

Knowledge of the following structural formulas will be required: amino acids found in proteins and products of their transamination, the basic monosaccharides and disaccharides (glucose, fructose, galactose, ribose, xylose, deoxyribose, maltose, lactose, and sucrose), the basic fatty acids (stearic, palmitic, oleic, linoleic,  $\alpha$ -linolenic, and arachidonic acid), cholesterol, acylglycerols, ketone bodies, all intermediates of glycolysis, the citric acid cycle and  $\beta$ -oxidation of fatty acids.

The test may contain open questions, multiple-choice questions as well as fill-in metabolic schemes. The revision test is passed if at least 60% of points are obtained. In case of failure two more chances to retake the test can be provided.

February 6<sup>th</sup>, 2024

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