

Syllabus
Pathological Physiology 1
Winter Semester 2022/2023

Week 2

General Medicine

A. Lecture

1. **Etiology II**

- Hereditary metabolic disorders

B. Seminars according to schedules on department webpage (patfyz.medic.upjs.sk)

1. **T:** Physical factors as causes of diseases
 - Pathological effects of mechanical energy
 - Hyperbaria/hypobaria; hyperthermia/hypothermia
 - Effects of electromagnetic field; effects of ionizing radiation
2. **S:** Chemical factors as causes of diseases
 - Environmental intoxications (heavy metals, CO,....)
 - Effects of smoking and alcohol abuse
3. Examination of knowledge (quiz, oral examination)
4. Presentations of the selected topics according to the group schedules

Dental Medicine

A. Lecture

1. **Etiology I**

- Monogenic and chromosomal diseases
- Mendelian, non-Mendelian inheritance
- Genetics in dental medicine

B. Seminars according to schedules on department webpage (patfyz.medic.upjs.sk)

1. **T:** Physical factors as causes of diseases
 - Pathological effects of mechanical energy
 - Hyperbaria/hypobaria; hyperthermia/hypothermia
 - Effects of electromagnetic field; effects of ionizing radiation
2. **S:** Chemical factors as causes of diseases
 - Environmental intoxications (heavy metals, CO,....)
 - Effects of smoking and alcohol abuse, changes in oral cavity
3. Examination of knowledge (quiz, oral examination)
4. Presentations of the selected topics according to the group schedules

Seminars (S) = special topics for discussion; **Tutorials & homeworks & exams (T)** = discussions, consultations, oral and quiz exams on the current topics.

Note: The range of topics and their time-table during the tutorials and seminars in each group is determined by the teacher and to a large extent, by the presentations, consultation interests, questions and readiness of the group and may vary in between groups. Neither tutorials nor seminars are lectures, but dialogue and discussion and thus require an active participation and preparation of students for the topics.

Recommended audiovisual materials

Hereditary metabolic disorders

- Phenylketonuria - causes, symptoms, diagnosis, treatment, pathology <https://www.youtube.com/watch?v=HYq0ld-C0uQ>

- Pompe disease - causes, symptoms, diagnosis, treatment, pathology <https://www.youtube.com/watch?v=ecRCw4NKcJ8>
- Mucopolysaccharide Storage Disease Type I: Hurler, Hurler-Scheie, and Scheie syndromes <https://www.youtube.com/watch?v=en9M2P8SVRE>
- Acute Intermittent Porphyria <https://www.youtube.com/watch?v=fT6qNbZ-1D8>
- Albinism | Genetics, Different Types, and What You Need to Know <https://www.youtube.com/watch?v=YatHpLAIYI0>
- Gout https://www.youtube.com/watch?v=SH_ceFaKLA8

Physical factors

- Compartment syndrome (Crush sy.)- causes, symptoms, diagnosis, treatment, pathology <https://www.youtube.com/watch?v=iZ7zRzgMgdk>
- Blast Injuries <https://www.youtube.com/watch?v=4Q208UposjQ>
- G-Force, Jerk, and Passing Out In A Centrifuge <https://www.youtube.com/watch?v=DMKcO-T5Y4o>
- Motion Sickness (kinetosis)- Causes, Symptoms, Treatments & More... <https://www.youtube.com/watch?v=cCnrZlduBb8>
- Biological Effects of Radiation <https://www.youtube.com/watch?v=EuKzI3g5ra4>
- The effects of radiation on our health <https://www.youtube.com/watch?v=tq6FDyFeCN0>

Chemical factors

- Smoking Causes Cancer, Heart Disease, Emphysema <https://www.youtube.com/watch?v=gwuwrRK-l2Y>
- The effects of nicotine in the body <https://www.youtube.com/watch?v=Y2dwC2qkVZQ>
- Alcoholism - causes, symptoms, diagnosis, treatment, pathology <https://www.youtube.com/watch?v=e5DxD6Tuxxw>
- Alcohol and your Brain <https://www.youtube.com/watch?v=zXjANz9r5F0>
- Alcohol Physiology (ethanol, metabolism and biochemistry) <https://www.youtube.com/watch?v=T8k8SgfpQ9k>
- Educational video: Methanol Poisoning <https://www.youtube.com/watch?v=fuezSNmESP8>