

Syllabus
Pathological Physiology 1
Winter Semester 2022/2023
Week 3

General Medicine

A. Lecture

1. Etiology III

- Disorders of nutrition; Obesity, Malnutrition qualitative & quantitative; Dietology

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

1. T: Genetics – overview

- Types and mechanisms of mutations
- Monogenic diseases
- Monogenic diseases with non-Mendelian inheritance (imprinting, triplet repeat mutations, mitochondrial diseases)

2. S: Chromosomal aberrations

- Chromosomal aberrations structural & numerical
- Genetic background of complex diseases (polygenic heredity, polymorphism, epigenetic mechanisms etc.)

3. Examination of knowledge (quiz, oral examination)

4. Presentations of the selected topics according to the group schedules

Dental Medicine

A. Lecture

1. Etiology II

- Disorders of nutrition (obesity, malnutrition)
- Disorders of nutrition in dentistry (incl. avitaminoses)

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

1. T: Genetics – overview

- Types and mechanisms of mutations
- Monogenic diseases
- Monogenic diseases with non-Mendelian inheritance (imprinting, triplet repeat mutations, mitochondrial diseases)

2. S: Chromosomal aberrations

- Chromosomal aberrations structural & numerical
- Genetic background of complex diseases (polygenic heredity, polymorphism, epigenetic mechanisms etc.)

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

Obesity

- Leptin and Ghrelin hormones https://www.youtube.com/watch?v=ev-IN_pXESk
- Genetics of obesity <https://www.dw.com/en/the-genetics-of-obesity/av-51619892>

Genetics

Monogenic diseases

- Marfan syndrome <https://www.youtube.com/watch?v=p4Ev9KEyw78>
- Sickle cell anemia https://www.youtube.com/watch?v=flIJmg_1hv0
- Familial hypercholesterolemia <https://www.youtube.com/watch?v=kT9b7ojiU3U>

Chromosomal diseases

- Turner syndrome https://www.youtube.com/watch?v=fdG_Fi0YE2s
- Down syndrome https://www.youtube.com/watch?v=ze_6VWwLtOE
- Klinefelter syndrome <https://www.youtube.com/watch?v=2i0Ms71DN44>

Nonmendelian inheritance

- Fragile X chromosome <https://www.youtube.com/watch?v=afH4-xFVmY>
- Huntington disease <https://www.youtube.com/watch?v=nJoS5MOgmH4>
- Prader-Willi syndrome <https://www.youtube.com/watch?v=nYvm4Rsh7t8>