

**Syllabus**  
**Pathological Physiology 1**  
**Winter Semester 2021/2022**  
**Week 3**

**General Medicine**

**A. Online lecture via Microsoft Teams**

**1. Etiology III**

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

**B. Presence 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. Online lecture via Microsoft Teams**

**1. Etiology II**

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

**B. Presence 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](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](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](https://www.youtube.com/watch?v=fdG_Fi0YE2s)
- Down syndrome [https://www.youtube.com/watch?v=ze\\_6VWwLtOE](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=nJoS5MOqmH4>
- Prader-Willi syndrome <https://www.youtube.com/watch?v=nYvm4Rsh7t8>