MUNI
MED

**Learning unit: Drug interactions**

**Impact of the learning unit:**

The learning unit gives an overview of the basic types of drug-drug interactions and classifies interactions with respect to their mechanism (pharmacokinetics, pharmacodynamics, pharmaceutical), respect to the final effect (antagonistic, synergistic), or respect to their severity.

**Important terms**

drug-drug interactions
- pharmaceutical
- pharmacokinetic
  - on the level of
    - absorption
    - distribution
    - metabolism
    - excretion
- pharmacodynamic
polypharmacy
desired interaction - use
- antagonism
  - antidotes
- summation
- potentiation
- examples
  - antibiotics
  - antihypertensives
  - anticancer treatment
unwanted interaction
- drugs affecting CYP activity
- inhibitors of PgP
- influence of meal on drug effect
- food supplements
evaluation of drug-drug interaction
proposed solution of drug-drug interaction

**Learning outcomes**

Student explains: drug tolerance, tachyphylaxis, allergy, upregulation, downregulation, internalization of receptors.

Student recognizes drug-drug interaction, describes its severity, and classifies the type of interaction.

Student is oriented in the information sources and recognizes relevant ones.

Student proposes solution of drug-drug interaction and knows suitable alternative drug combination.

**Recommended study materials**

Rang & Dale's Pharmacology, 9th edition, 2020

Study materials of the course aVLFA0822c and aVLFA0822p.

https://www.drugs.com/drug_interactions.html

https://www.medicinescomplete.com/mc/alerts/current/drug-interactions.htm

https://reference.medscape.com/drug-interactionchecker

**Exam questions**

*General pharmacology:* 27. Drugs interactions - overview, examples