

Occupational toxicology

C5



Myriam Borgatta



Sven Hoffmann

20

| | |
|------------------------------|--|
| Aim | <p>This module aims to instruct the fundamentals of toxicology and is divided in two parts: chronic absorption of chemicals used at work (part I) and acute absorption (part II: Hazardous materials training, HAZMAT). Fundamental toxicology describes the disposition of a compound within the human body. This module focuses on how contaminants enter the human body (absorption), behave inside the body (distribution), transform (metabolism), and get eliminated.</p> <p>Upon completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Explain the concepts of absorption, distribution, metabolism and elimination (ADME), and the parameters influencing ADME • Retrieve and link absorption to metabolite elimination and internal dose • Understand organ toxicity such as neurotoxicity, hematotoxicity, hepatotoxicity, pulmonary toxicity and reprotoxicity • Give examples common chemicals used at the workplace and their organ toxicities • Manage HAZMAT-events (AHLs) • Treatment of acute intoxications in first aid settings (AHLs) |
| Contents | <ul style="list-style-type: none"> • Basic principles of toxicology • Routes of absorption and possible effects of main toxic agents in the workplace in Switzerland • Carcinogenic, mutagenic and reprotoxic chemicals • Principles of regulatory toxicology • Toxicological data bases for work and health specialist • Official hazmat life support course (AHLs), including international certification • Poisoning treatment paradigm, including specific Antidotes (AHLs) |
| Methods | Lectures; Group work; Practical exercise |
| ECTS credits | 2 ECTS credits= approx. 60 hours of workload including 47 hours of on-campus lectures and 13 hours of pre-assignment and exam |
| Target audience | <ul style="list-style-type: none"> • Students in the DAS Work+Health program • Occupational physicians and occupational hygienists • Other occupational health specialists interested in toxicology and hazmat life support |
| Module manager | <ul style="list-style-type: none"> • Myriam Borgatta; University of Lausanne, Unisanté, Dép. Santé au Travail et Environnement • Sven Hoffmann ; University of Zurich, Epidemiology, Biostatistics and Prevention Institute |
| Administration | <p>Part 1: Monica Egger; monica-maria.egger@unisanté.ch</p> <p>Part 2: Andrea Frederick; andrea.frederick@uzh.ch</p> |
| Dates and location | Part 1: 03-06 June 2024 in Lausanne / Part 2: 13-14 June 2024 in EAZ Schwarzenburg (AHLs course) |
| Fee | CHF 4 080.– |
| Registration deadline | 01 May 2024 |