



CATALOGUE OF LEARNING OBJECTIVES IN OCCUPATIONAL, SOCIAL, AND ENVIRONMENTAL MEDICINE (as of July 2021)

Learning Objectives OCCUPATIONAL and SOCIAL MEDICINE

Basics of occupational safety and health for medical practice

- Concept of stress and strain
- Legal foundations of occupational health and safety in Germany
- Industrial physicians' tasks: work anamnesis and risk assessment
- Hierarchy of occupational health and safety measures
- Definition and legal treatment of occupational accident and disease
- Reporting obligation for suspected occupational disease
- Similarities and differences of occupational and environmental medicine
- Foundation of ethical implications regarding the interaction of work and health

Occupational medicine in health services

- risk assessment health service
- blood-borne infectious diseases
- needlestick injuries
- aerogen infectious diseases
- occupational health and safety measures
- occupational medical precautions in health services
- vaccine indications
- skin exposure in health services
- maternity protection

Work-related respiratory diseases

- Basics of pulmonary function testing
- Allergic respiratory diseases
- Irritant-toxic respiratory diseases
- Diagnosis of occupational asthma
- Risk factors and prognosis of occupational asthma
- chronic obstructive bronchitis or emphysema by occupational exposure

Noise at the workplace

- Effect of noise on the human ear
- Measurement of noise
- Noise reduction and prevention
- Ear protection
- Noise-induced hearing loss as occupational disease
- extra-auditory effects of noise on humans

Chemistry at the workplace

- Biomonitoring
- Evaluation of measured values
- Reference values
- occupational exposure limit values
- heavy metals (lead, mercury, et al.)
- organic substances (benzene, hexane, PCB, polycyclic aromatic hydrocarbons, aromatic amines, et al.)
- carcinogenic substances

Work-related skin diseases

- UV exposure
- Chemical skin damage
- travel dermatology
- allergy diagnostics
- skin eczema, dermatologist procedures

Work-related cancers

- pulmonary carcinogens
- occupational diseases caused by silicogenic dust
- occupational diseases caused by asbestos dust
- occupational cancer diseases of the upper respiratory tract, the haematopoietic system, the urinary and other organ systems

Psychosocial stress and strain at the workplace

- Concept of stress and strain in the psychosocial context
- Individual and structural prevention
- Psychological work characteristics
- Demand-centred models (e.g. job-characteristics-model, complete activities)
- Resource-centred models (e.g. demand-control-model, effort-reward-imbalance, social support)

- Stress-centred models (e.g. regulation hindrances, work interruptions)
- Effects of working conditions on psychological and physical health and performance
- Specific conditions and consequences: leadership, burnout
- Harassment at the workplace

Physically caused occupational diseases

- Vibration, shock (circulatory disturbances, degenerative joint diseases)
- lifting and carrying of heavy loads (intervertebral disc)
- pressure (meniscus, bursa, nerves)
- mechanical strain (tendon sheath, carpal tunnel syndrome)
- gonarthrosis as occupational disease
- musicians dystonia
- ergonomic workplace design
- diseases caused by work in pressurized air
- diseases caused by ionising radiation

Social Medicine

- social security system in Germany
- key concepts of the welfare state
- basics of rehabilitation
- statutory rehabilitation authorities
- workforce participation benefits
- informal work
- occupational accidents
- ICF: International Classification of Functioning, Disability and Health

Learning Objectives ENVIRONMENTAL MEDICINE

Basics of environmental medicine

- Differentiation between occupational and environmental noxious agents
- Biological effects of environmental influences
- Diseases caused by environmental influences (radon, air pollution, second-hand smoke)
- Fume events
- Printer emissions
- Environmental-medical syndromes (sick building, multiple chemical sensitivity, MUPS, fibromyalgia, chronic fatigue syndrome, environment-related somatoform disorders)
- Significance of environmental-medical casuistics

Air pollutants in the environment

- airborne particles, particulate matter
- ozone
- diesel exhaust

Antibiotic resistance

- Intake of antibiotics and antibiotic resistance
- Antibiotic resistance in the environment and at workplaces
- Antibiotic resistance in wastewater
- Study designs used to assess antibiotic resistance

Chemistry in the environment

- biomonitoring
- Evaluation of measured values
- Reference values
- Environmental limits (human biomonitoring values)
- heavy metals (lead, mercury)
- organic substances (benzene, hexane, PCB, polycyclic aromatic hydrocarbons, aromatic amines)
- carcinogenic substances