

MANDATORY STATISTICAL DATA 2009/2010 2ND SEMESTRE

Not knowing these data on the oral exam leads to an immediate fail.

Demography and epidemiology

All calculation methods are mandatory

World population: 6,7 billion

Number of death worldwide (annually): 58 million

Number of birth worldwide (annually): 148 million

Life expectancy at birth for Hungary: for males: 69.8, for females 77.8 years.

Total fertility rate for Hungary: 1.35.

Health and disease, health promotion

Breast cancer screening program (in Hungary): for ladies between 45–65 in every two years.

Cervical cancer screening program (in Hungary): for ladies between 25–65 in every three years

WHO: the year of foundation (1948), number of member countries (192)

Environmental health: Air pollution

Climate: average temperature elevation on the Earth surface in the last century: 0,74 C.

Smog: all characteristics for Los Angeles and London-type smog

Environmental health: Water and soil

Physiological need of drinking water: 2-3 l/person/day

Water used in developed countries: 100-150 l/person/day

Maximum concentration for chemicals in drinking water:

Fluorid: 1,5 mg / l

Arsenic: 10 µg/l

Nitrate: 50 mg/l

Nitrite: 0,5 mg / l, in the water comes from pipeline: 0,1 mg/l,

Total trihalomethanes: 50 µg/l

Toxicology - Classification by LD₅₀:

Extremely toxic < 50 mg

Toxic: 25-200 mg

Slightly toxic: 200-2000 mg

Occupational health

First sign of hearing loss: decrease of hearing threshold with 30dB at 4000 Hz

Limit of noise in workplace: 85 dB

Rate of occupational cancer to all cancer 8-12%

1 mikrorisk = among 1 million person 1 death appear in lifetime due to exposition (70 years average)

Ionizing and non-ionizing radiation

Natural background radiation: 2,4 mSv (World average) – Radon is responsible for 1,2 mSv

Occupational dose limit: annual effective dose of 20 mSv

youth – 16-18 yrs (6 mSv annually),

EPIDEMIOLOGY OF COMMUNICABLE DISEASES

Communicable diseases are responsible for 28% of overall mortality in the world.

Worldwide statistics of some communicable diseases

Disease	No. of cases	No. of deaths
Malaria	250 million	900 000
Enteritis infectiosa	?	2 million
Dengue	50 million	?
Tuberculosis	10 million	1,5 million
Influenza	3-5 million	250-500 000
Haemophilus Influenzae B	3 million	386 000
HIV / AIDS	3 million	2 million
Cholera	140,000	2500
Plague	2118	182
Polio	1315	-

Some of the most frequent and important communicable diseases in Hungary (2008)

Disease	Case (No)	Lethality (%)
Botulism	3	-
Salmonellosis	7 166	0,06
Campylobacteriosis	5 563	-
Enteritis inf. k.m.n.	35 600	0,006
AIDS	23	n.a.
Pertussis	33	-
Scarlatina	3 274	-
Parotitis epidemica	14	-
Varicella (chicken pox)	36 412	0,005
Mononucleosis infectiosa	1 110	-
Tick-borne encephalitis	77	1,3
Lyme-disease	1 811	-
Tetanus (lockjaw)	4	-
Tuberculosis	1606	n.d.

Vaccination calendar of Hungary (all data are mandatory!)

<u>Age</u>	<u>Immunization</u>
0-6 weeks:	BCG
2 months:	DPaT + IPV + Hib I
3 months:	DPaT + IPV + Hib II
4 months:	DPaT + IPV + Hib III
15 months:	MMR
18 months:	DPaT + IPV + Hib IV
6 years:	DPaT + IPV
11 years:	DPaT (September)
11 years:	MMR (October)
13 or 14 years:	Hepatitis B

PCV vaccine (voluntary): 2, 4 and 15 month

BCG: Bacille Calmette-Guerin, DPaT: Diphtheria-Pertussis-Tetanus, IPV: Inactivated Polio Vaccine, MMR: Measles-Mumps-Rubella, PCV: pneumococcus vaccine (7 component)

Sexually transmitted diseases:

Number of HIV infected people in the world (2008) 33,5 million

Number of new HIV cases in 2008: 2,7 million

Number of AIDS death in 2008: 2 million

Nosocomial infections

Nosocomial infections appear among 5-6% of the patients admitted to hospital. Among them 1-1,5 % this is the reason for death. Their hospital treatment is usually longer with three days.

Distribution of nosocomial infections

- urogenital infections 35-40%
- pneumonia 15-18%
- postoperative wound infections 16-17%
- sepsis 7-11%
- other infections 23-24%

EPIDEMIOLOGY OF NON-COMMUNICABLE DISEASES

An estimated 17.5 million people die from cardiovascular disease annually, representing 30 % of all global deaths. The estimated number of people with hypertension worldwide is 600 million and 3 million are estimated to die annually. The prevalence of hypertension varies among 10-40% in different countries. Hungarian prevalence of hypertension is 33% for women, 25% for men.

Estimated total number of new cancer cases annually:	11-13 million
Total number of cancer deaths annually :	7-8 million

Number of new cancer cases annually in Hungary: 84993

Ageing index: $\frac{\text{population age 65+ years}}{\text{population < 15 years}}$

Old age dependency ratio: $\frac{\text{population age 65+ years}}{\text{population 15-64 years}}$

Proportion of European population age 65 and over: 16,71% (WHO HFA 2006)

Smoking

No. of annually consumed cigarettes in Hungary per person: 2151

No. of annually consumed cigarettes in EU 15 countries per person: 1626

Forrás: WHO HFA (2000)

Smoke contains an estimated 4000 chemicals, among them 70 is known carcinogenic.

Alcohol

Annual pure alcohol consumption in Hungary (l/person): 11,6

Annual pure alcohol consumption in EU 15 (l/person): 9,35

NUTRITION

BMI

Classification	BMI Category (kg/m ²)	Risk of developing health problems
Underweight	< 18.5	Increased
Normal Weight	18.5 - 24.9	Least
Overweight	25.0 - 29.9	Increased
Obese class I	30.0 - 34.9	High
Obese class II	35.0 - 39.9	Very high
Obese class III	≥ 40.0	Extremely high

Obese class I and II are also called moderate, Obese class III as severe obesity.

Recommended intake levels of various micro- and macronutrients

Food Component	Proportion of total daily calorie intake %	Daily reference value
Fat(TF)	15-30	
saturated	< 10	
cholesterol		< 300 milligrams (mg)
PUFA	6-10	
n-6 PUFA	5-8	
n-3 PUFA	1-2	
MUFA	TF- (SFA + PUFA)	
total carbohydrate	55-75	
sugar	< 10	
fiber		>400g
salt		< 5g
protein	10-15	
TrFA	<1	

SFA = saturated fatty acids

PUFA = polyunsaturated fatty acids

MUFA = monounsaturated fatty acids

TFA = trans fatty acids