

# Analytic Questions

## Introduction

STULONG data were analysed using basic statistic methods. The listed analytic questions, which have not been subjected to study yet, can be divided into four groups.

- Analytic questions related to the entry examination.
- Analytic questions related to the long-term observation.
- Are there any strong relations concerning postal questionnaire.
- Are there any strong relations concerning entry examination, long-term observations and death.

For these questions see classification of the patients into three basic groups:

- A) Normal Group (for attribute KONSKUP there are codes 1 + 2).
- B) Risk Group (for attribute KONSKUP there are codes 3 + 4).
- C) Pathologic Group (for attribute KONSKUP there is code 5)

## Analytic questions related to the entry examination

1. What are the relations between **social factors** (see attribute group social characteristics) and the following characteristics of men in the respective groups:
  - a) Physical activity at work and in free time (see group of attributes physical activity),
  - b) Smoking (see group of attributes smoking),
  - c) Alcohol consumption (see group of attributes alcohol),
  - d) BMI (body mass index,  $BMI = \text{weight in kg} / (\text{height in m})^2$ ) (see group of attributes physical examination),
  - e) Blood pressure (see group of attributes physical examination),
  - f) Level of total cholesterol, HDL cholesterol, triglycerides (see group of attributes biochemical examination).
2. What are the relations between **physical activity** at work and in free time (see group of attributes physical examination) and the following characteristics of men in the respective groups:
  - a) Smoking (see group of attributes smoking),
  - b) Alcohol consumption (see group of attributes alcohol),
  - c) BMI (body mass index,  $BMI = \text{weight in kg} / (\text{height in m})^2$ ) (see group of attributes physical examination),
  - d) Blood pressure (see group of attributes physical examination),
  - e) Level of total cholesterol, HDL cholesterol, triglycerides (see group of attributes biochemical examination).

3. What are the relations between **alcohol consumption** (see group of attributes alcohol) and the following characteristics of men in the respective groups:
  - a) Smoking (see group of attributes smoking),
  - b) BMI (body mass index,  $BMI = \text{weight in kg} / (\text{height in m})^2$ ) (see group of attributes physical examination),
  - c) Blood pressure (see group of attributes physical examination),
  - d) Level of total cholesterol, HDL cholesterol, triglycerides (see group of attributes biochemical examination).
4. Is there a correlation between the **skin folds** and **BMI** in the particular basic groups of patients?

## Analytic questions related to the long-term observation

1. Are there any differences between men of the two risk subgroups (for the attribute KONSKUP there are codes 3 or 4 i.e. RGI or RGC), who came down with the observed cardiovascular diseases in the course of 20 years and those who stayed healthy (the illness is based on attributes HODN1, ROK1, HODN2, ROK2, HODN3, ROK3, HODN11, ROK11, HODN12, ROK12, HODN13, ROK13, HODN14, ROK14, HODN21, ROK21, HODN23, ROK23, see the group of attributes questionnaire A<sub>2</sub>).
2. Are there any differences in the entry examination between men of the risk group (for the attribute KONSKUP there are codes 3 or 4 i.e. RGI or RGC), who came down with the observed cardiovascular diseases (see paragraph 5) and those who stayed healthy? We are interested in the following aspect:
  - a) Social factors (see group of attributes social characteristics),
  - b) Physical activity at work and in free time (see group of attributes physical activity),
  - c) Smoking (see group of attributes smoking),
  - d) Alcohol consumption (see group of attributes alcohol),
  - e) BMI (body mass index,  $BMI = \text{weight in kg} / (\text{height in m})^2$ ) (see group of attributes physical examination),
  - f) Blood pressure (see group of attributes physical examination),
  - g) Cholesterol level (see group of attributes biochemical examination).
3. Are there any differences in the development of risk factors and other characteristics between men of the risk group (for the attribute KONSKUP there are codes 3 or 4 i.e. RGI or RGC), who came down with the observed cardiovascular diseases (see paragraph 5) and those who stayed healthy? We are interested in the following aspect:
  - a) Change of job (see attribute ZMCHARZA – change of job type),
  - b) Change of physical activity in the free time (see attribute ZMTELAKT – change of physical activity in the free time and attribute AKTPOZAM – current physical activity in the free time),

- c) Smoking (see attributes ZMKOUR – change of smoking and POCCIG – number of cigarettes a day),
- d) Diet (see attribute ZMDIET – change of diet compared to the previous period),
- e) BMI (body mass index), see below,
- f) Blood pressure (see attributes SYST, DIAST, in control examinations),
- g) Level of lipids (see attributes CHLST, CHLSTMG, TRIGL, TRIGLMG, HDL, HDLMG, LDL see group of attributes biochemical examination),
- h) Glycaemia and level of uric acid (see attributes GLYKEMIE and KYSMOC),
- i) Combination of increased triglycerides level and lower HDL cholesterol,
- j) Combination of overweight and increased level of:
  - i. total cholesterol,
  - ii. LDL cholesterol,
  - iii. triglycerides.
- k) Combination of overweight and lower level of HDL cholesterol,
- l) Combination of smoking and increased level of:
  - i. overall cholesterol,
  - ii. LDL cholesterol,
  - iii. triglycerides.
- m) Combination of smoking and lower level of HDL cholesterol.

## Definition of increased triglycerides level and lower HDL cholesterol

- The patient has **increased level of total cholesterol** if the value of CHLST is  $\geq 5.2$  mmol/l
- The patient has **increased level of triglycerides** if the value of TRIGL is  $\geq 2.0$  mmol/l
- The patient has **lower level of HDL cholesterol** if the value of HDL is  $\leq 1.1$  mmol/l.
- The patient has **increased level of LDL cholesterol** if the value of LDL is  $\geq 3.5$  mmol/l.
- The patient is overweight if his BMI  $\geq 25$ . BMI = weight in kg/(height in m)<sup>2</sup> (see attributes HEIGHT in the first examination and WEIGHT in the control examination).