Arterial blood pressure and pulse changes among students during the process of studies in Lithuania

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Aim of Investigation: to investigate changes of arterial blood pressure and pulse among the students in the process of studies at the Kaunas Police Faculty of Lithuanian University of Law.

Object of Investigation: Students of Kaunas Police Faculty of Lithuanian University of Law. 1250 students participated in the investigation: 640 females and 610 males, who entered University in 1998-2002.

Methods of Investigation: the arterial blood pressure was measured on the right hand twice: at the beginning of the first term and at the middle of the second term. The pulse has been counted as number of strokes per one minute on the right radial artery.

The data of the investigation were analysed according to statistical methods, based on data processing and base accumulation programs, which were prepared by professional computer specialists of Kaunas Police Faculty.

Results of Investigation: the average systolic arterial blood pressure decreased for female students from 128,6 mm Hg to 120,8 mm Hg, and from 134,6 mm Hg to 126,2 mm Hg for male students accordingly. The average diastolic arterial blood pressure for female students decreased from 79,6 mm Hg to 76,6 mm Hg and from 83,6 mm Hg to 79,9 mm Hg for male students accordingly. Although the statistical reliability for the changes in means of arterial blood pressure has not established, but a clear tendency of blood pressure decreasing trend during the period of studies not depending on sex, has been observed. The decreasing change presents an adaptable ability of a human organism. Arterial hypertension among male students was determined more frequently as compared to female students. The systolic arterial hypertension (≥140 mm Hg) is detected for 6,8% of male students and the diastolic arterial hypertension (≥ 90 mm Hg) – for 3,8%. The corresponding indicators for female students are as follows: 5,3% and 3,2%. Any changes in the arterial hypertension rates have not detected during the period of studies. The reliable changes in pulse measuring during the period of studies were not established. The average frequency of female students pulse rate changed from 78,5 beats per min. to 77,2 beats per min., and among male students correspondingly: from 76,4 beats per min. to 78,3 beats per min. The decreasing trend of mean pulse rate among female students and increasing trend of mean pulse rate among male students have been observed during the period of studies.

Conclusion: the obtained results present a good physiological adaptation of students in the process of studies.