

ABSTRACT

Title of the work:

Physical fitness of personal protectors of the Police of the Czech Republic.

Objectives:

The main aim of the work was to determine and evaluate the profile of physical fitness of the members of the Close Protection Division, Protective Services of the Police of the Czech Republic.

Methods:

The work has character of empirical research, its main method was observation. Research sample was composed of 21 members (age range 28-55) of the Close Protection Division of Protection Service of the Police of Czech Republic. Within complex testing were used non-invasive methods (anthropometric testing, analysis of body composition, anaerobic and aerobic testing, tests for local power and tests of reactivity). An invasive method was also used to test a capillary blood sample to determine the cholesterol level and the postworkout lactate level in blood. Somatic factors were evaluated individually (anthropometry, somatotype, body composition). Conditioning claims were also evaluated (anaerobic, aerobic, local power). Within psychophysiological requirements as tested reactivity on acoustic and optical signal and as a last there were found out information from health area, blood pressure was measured and compared to level of cholesterol of research sample.

Results:

The results of observation has shown that average body height of the file was $184 \pm 4,9$ cm, body weights was $90,6 \pm 9,7$ kg and his BMI was $26,7 \pm 2,50$ kg/m², amount of body fat was $18,3 \pm 4\%$ and amount of muscle mass was $70,2 \pm 6,4$ kg. Average somatotype of bodyguards was endomorphic mesomorph, which was characterized by numbers 2,7 – 6,0 – 1,6. Research sample reached the anaerobic capacity of $270,7 \pm 27,7$ J.Kg⁻¹ with maximal relative performance $11,0 \pm 1,1$ W.Kg⁻¹. Performance parameter VO₂max was

set on $4,33 \pm 0,5 \text{ l}\cdot\text{min}^{-1}$ with maximal relative performance $3,58 \pm 0,4 \text{ W}\cdot\text{kg}^{-1}$ within PP (personal protector). Average maximal handgrip was expressed by value $57,78 \pm 7,1 \text{ kp}$ with left hand and $58,07 \pm 8,4 \text{ kp}$ with right hand. Value $56,52 \pm 8,4 \text{ kp}$ expresses grip of dominant hand in perseverance test with average decrease of performance $30,6 \pm 14,9 \%$. Average speed reaction on acoustic initiative was $0,157 \pm 0,017 \text{ s}$. Average speed reaction on optical initiative expresses value $0,204 \pm 0,013 \text{ s}$. Average blood pressure measured within research sample was set on $130,3 \pm 15,1 \text{ mmHg}$ with systolic and $83,7 \pm 6,8 \text{ mmHg}$ with diastolic blood pressure, average value cholesterol level in blood was $4,53 \pm 0,8 \text{ mmol}\cdot\text{l}^{-1}$.

Compared to the average population, the research file was characterized by a higher body height, higher body weight, dominance of the mesomorphic somatic component and a higher proportion of non-fat mass. The monitored individuals achieved better results when testing of fitness claims, in detecting the rate of response to the acoustic stimulus, as well as better cholesterol levels in the blood. Conversely, we recorded a higher percentage of body fat, a slower response rate to optical signal and a mildly elevated blood pressure.

Keywords:

somatotype, bioelectrical impedance, body composition, anaerobic and aerobic capacity, reactivity, health risk parameters, Protection Service of the Police of the Czech Republic