

Correlation of Autonomic Function Tests with Age, Sex, Anthropometry and Body Composition in Sedentary Office Workers

Vibha Gangwar*, Manish Kumar Verma, Nitin Ashok John, Ritesh Singh Gangwar, Arvind Kumar Singh and Rajani Bala Jasrotia

*Dr Ram Manohar Lohia Institute of Medical Sciences, India.

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ABSTRACT

Background: Sedentary life style leads to autonomic dysfunction with sympathetic hyperactivity which leads to increased morbidity.

Objective: This study was aimed to investigate the relationship of autonomic function tests with age, sex and anthropometric measurements in sedentary workers.

Methods: This study was conducted on 50 healthy sedentary office workers aged between 20 to 50 years. Their anthropometric and parameters of body composition were calculated. Autonomic functions were assessed by recording of frequency domain parameters of heart rate variability (HRV).

Results: Among the HRV parameters, the mean LF, HF LF/HF ratio and total power was $453 \pm 428 \text{ ms}^2$, $406 \pm 612 \text{ ms}^2$, 2.15 ± 2.64 and $1432 \pm 1238 \text{ ms}^2$, respectively. There was no significant difference in HRV parameters of male and female subjects ($P > 0.05$). HF, LF and LF/HF ratio decreased significantly with age ($r = -0.422$; $p = 0.032$). No significant correlation was found between HRV parameters and anthropometric parameters ($p > 0.05$). Among the parameters of body composition, specifically in case of fat free mass the LF/HF ratio was significantly increased ($r = 0.582$, $p = 0.001$).

Conclusion: Ageing process causes a decrease in HRV. As the weight increases, LF/HF ratio increases indicating increased sympathetic activity.

Corresponding author: Vibha Gangwar, Dr Ram Manohar Lohia Institute of Medical Sciences, India, E-mail: vgangwar.vg@gmail.com

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