

PHYSICAL FITNESS LEVELS BETWEEN VEGETARIAN AND NON-VEGETARIAN YOUNG ADULTS

W.W.C.A. Wickramasinghe^{1*} and A. De Silva²

¹*Allied Health Sciences Unit, Faculty of Medicine, University of Colombo, Sri Lanka*

²*Department of Physiology, Faculty of Medicine, University of Colombo, Sri Lanka*
**chamaliashingshana@gmail.com*

Vegetarianism has become a popular dietary practice for people of all ages. A vegetarian diet is thought to have many health benefits. However, if attention is not paid to diet, there could be deficiencies of some macronutrients and micronutrients that may impact on physical fitness. Comparison of physical performance in vegetarians with non-vegetarians report conflicting evidence, with some report poor physical performance among vegetarians while others report better physical performance than non-vegetarians. Despite the popularity of vegetarianism no research exists regarding physical fitness levels of vegetarians in Sri Lanka. A cross sectional study was conducted and a convenient sample compared selected aspects of physical fitness between vegetarians of Sri Lanka vegetarian society who have been vegetarians for two or more years and non-vegetarian Physiotherapy undergraduates of Colombo Medical Faculty. Hundred (n=50 [vegetarians], n=50 [non-vegetarians]) young adults between 20-30 years participated in the study. Each group was consisted of 25 males and 25 females. Height and weight were measured using standard protocol and Body mass index (BMI) was calculated. Recovery heart rate (RHR) following 3 min step test, 1 min abdominal curl test and sit & reach test (SRT) were used to measure the level of physical fitness in the aspects of cardio-respiratory endurance, muscular strength-endurance and musculoskeletal flexibility, respectively. Descriptive data was analyzed as means and standard deviations. Physical fitness parameters were compared between the two groups using the independent sample T-test. Statistical significance was set at $p < 0.05$. In both men and women, vegetarians had significantly lower RHR (males; 90.2 vs. 106.2 min^{-1} , females; 98.4 vs. 111.8 min^{-1} $p=0.000$) and significantly higher values for SRT (males; 19.4 vs. 15.2 inches $p=0.001$, females; 20.1 vs. 14.9 inches $p=0.000$) than non-vegetarians. No significant differences were seen in BMI (vegetarian and non-vegetarian males; 22.3 vs. 23.8 kg/m^2 $p=0.062$, vegetarian and non-vegetarian females; 19.9 vs. 21.2 kg/m^2 $p=0.103$) and number of abdominal curls (vegetarian and non-vegetarian males; 32.8 vs. 35 min^{-1} $p=0.339$, vegetarian and non-vegetarian females; 23.6 vs. 26.7 min^{-1} $p=0.113$) between two groups. In conclusion, the male and female vegetarian young adults appeared to have higher level of physical fitness than that of non-vegetarians when assessing cardio-respiratory endurance and musculoskeletal flexibility. However, vegetarians do not differ in body composition and muscular strength-endurance compared with non-vegetarians.