

# SEX-MEDIATED DIFFERENCES AMONG UNIVERSITY STUDENTS PERFORMING EXTREME PHYSICAL ACTIVITY DURING THE 3-MINUTE BURPEE TEST

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## Abstract

**Introduction.** The aim of this study was to evaluate sex differences in anthropometric indicators, body composition, physical fitness, and physiological parameters in young women and men performing extremely strenuous exercise during the 3-Minute Burpee Test (3-MBT). Post-exercise recovery during a 6-minute break was determined in the tested subjects. **Material and methods.** Ninety-six university students volunteered to take part in this study (45 women aged  $20.05 \pm 1.81$  years and 51 men aged  $20.20 \pm 2.71$  years). Endurance-strength abilities were determined during the 3-MBT motor fitness test, and body composition was determined with an InBody720 analyser. Data were analysed using a Mann-Whitney U test, with statistical significance accepted at  $p \leq 0.05$ . **Results.** The anthropometric indicators, body composition parameters, physical fitness levels (47.22 cycles/3 min), and physiological parameters measured during the 3-MBT were significantly higher in men ( $VO_{2\text{avg}} - 41.57$  mL/kg/min,  $VO_{2\text{max}} - 49.67$  mL/kg/min,  $EPOC_{\text{avg}} - 11.02$  mL/kg, and  $EPOC_{\text{peak}} - 27.84$  mL/kg) than in women. Women were characterised by significantly higher ( $p < 0.05$ ) body fat mass (BFM = 18.80 kg) and percent body fat (PBF 28.26%) than men. **Conclusions.** Male subjects were characterised by higher values of anthropometric indicators, body composition parameters (excluding body fat), motor fitness levels, and physiological parameters than women, and endurance-strength abilities were 23.75% higher, on average, in men than women.

**Key words:** university students, sex differences, body composition, extreme efforts, 3-MBT