Influence of body composition on physical activity of postmenopausal women
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The analysis of the relation of body composition with physical activity (PA) in postmenopausal women (PW) gives important tips for the development of exercise programs focused on their needs. The purpose of the study was to examine the association of various components of body mass with the levels of PA in this population, by observing the influence of menopausal characteristics.

The observational descriptive study included 25 PW (62.21 ± 4.89 years) with natural menopause. The body composition was evaluated by bioimpedance InBody 720 and by a Sahara bone sonometer. The skeletal muscle mass index (SMI) was estimated and PA levels were measured using the GT1M ActiGraph accelerometer. Association between variables was tested by the Spearman correlation coefficient and stepwise regression models were developed.

The sample revealed the presence of elevated levels of fat mass (FM, 37.96 ± 5.99%) and visceral fat area (VFA, 133.03 ± 25.08 cm²). The average values of skeletal muscle mass and calcaneal bone mineral density (BMD) were, respectively, 21.91 kg and 0.59 g/cm². The total PA ranged between 589.25 and 2755.75 minutes/week. There were no significant associations of age, time since menopause, VFA and calcaneal BMD with levels of PA. Regardless of hormone therapy and FM, women with better muscle condition display (p ≤ 0.05) higher levels of total PA (Beta = 0.421) and less time in sedentary activity. The percentage of fat mass proved to be an independent predictor (p ≤ 0.05) of moderate-vigorous activity time (Beta = −0.524, R² × 100 = 24.3%) and the number of steps executed per day (Beta = −0.464).

The results suggest that the excess of fat mass in postmenopause restricts physical activity in women, compromising the execution of minimum levels of moderate-vigorous intensity required for health. The improvement of muscle condition plays an important role in the reduction of time in sedentary activity.

**Key message**

- The presence of adequate levels of fat mass and muscle in postmenopausal women is associated to better levels of physical activity.