

Objective. Menopause is characterized by the presence of emotional instability and greater dissatisfaction with life. Therefore, we aimed to analyze the effects of an exercise intervention on quality of life and optimism in perimenopausal women.

Method. Fourteen perimenopausal women (54.1 ± 3.2 years) participated in a 9 weeks (60 minutes/session, 3 days/week) moderate-vigorous intensity (12-16 rating of perceived effort) exercise intervention (aerobic and resistance exercise mainly). Health-related quality of life and general optimism and pessimism were evaluated by means of the Short-Form Health Survey (SF-36) and the Revised Life Orientation Test, respectively. Non-parametric Wilcoxon signed ranks test for paired samples was used.

Results. The exercise program improved physical function by 12% ($P < 0.05$) and emotional role by 18% ($P = 0.05$). No statistically significant differences were found for the remaining SF-36 dimensions. After the exercise intervention participants' general optimism improved 21% ($P < 0.05$).

Conclusion. An exercise intervention program is successful by improving the physical functioning and general optimism of perimenopausal women. Because of the small sample size, the results must be taken cautiously. Future studies with greater sample sizes should confirm the present results.

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High intensity strength training in overweight adults at workplace: a pilot study

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Keywords: Resistance training; Health; Hypertension; Physical fitness

Objective. The purpose of this pilot study was to determine (a) the effects of high intensity strength training at workplace on blood pressure, fat percentage and physical fitness in overweight adults, and (b) the influence of this intervention on the blood pressure in a subsample of hypertensive subjects.

Methods. Overweight adults ($n = 15$) aged 42,8 years underwent anthropometric assessment (weight, fat percentage, waist circumference, and triceps skinfold), physical fitness assessment (leg extensor power, upper body endurance, hand grip strength and Vo_{2max}) and blood pressure assessment before and after 8 weeks of high intensity resistance training at workplace. Each training session consist of 16 sets of 45 repetitions performed at 1 repetition per second decreasing load at muscular failure starting at 60% of repetition maximum (RM).

Results. Weight, body fat percentage, and triceps skinfold decreased significantly with the high intensity resistance training protocol at workplace (all $p < 0.05$). Performance in physical fitness tests increased significantly with training (all $p < 0.05$), except for handgrip strength. Both systolic and diastolic blood pressure decreased significantly with R-HIRT at workplace (all $p < 0.05$) in hypertensive subjects.

Conclusion. This protocol performed at workplace in this pilot study produces health and fitness benefits in overweight and hypertensive people.

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Reliability of an adaptation of the 20m shuttle run test to be use in preschool children: The PREFIT 20m shuttle run test

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Keywords: Preschoolers; Cardiorespiratory fitness; Aerobic capacity; Physical fitness; Reliable

Aim. To examine the reliability of the PREFIT 20m shuttle run test (modified version of the original 20m shuttle run test) in preschool children from 3 to 5 years group.

Methods. A total of 130 students (4.91 ± 0.89 years; 77 boys) participated in the study. The PREFIT 20m shuttle run test consisted in run back and forth between 2 lines 20m apart with an audio signal. The initial running speed is 6.5 km/h and it is increased by 0.5 km/h/min. The test finishes when the preschool children fail to reach the end lines concurrent with the audio signals on 2 consecutive occasions. On the other hand, the test ends when the child stops because of exhaustion. Bearing in mind the young age of the children, two evaluators ran with a reduced group of children (e.g. 4-8 preschoolers) in order to provide an adequate pace. All the participants performed the test twice, two weeks apart.

Results. Mean test-retest difference (systematic error) in the number of laps achieved was 2 laps (test = 25 laps, re-test = 27 laps) for all the participants. According to the sex, the systematic error was 1 lap for boys and 3.4 laps for girls. Mean difference were 1.8, 3.3 and 1.6 laps in 3, 4 and 5 years groups, respectively. Nevertheless, no significant differences were found between sex ($P = 0.360$) or age groups ($P = 804$).

Conclusions. Our results suggest the PREFIT 20m shuttle run test is reliable in preschool children. Future longitudinal or intervention studies using this test should take into account that changes in the test performance of 2 laps may be due to the variability of the measure, while wider changes would be attributable to the intervention or changes associated with age.

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Effectiveness of an exercise intervention on fatigue and sleep quality in midlife women: the FLAMENCO project

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