

Effects of swiss-ball core strength training on strength, endurance, flexibility, and balance in sedentary women.

[Sekendiz B](#), [Cuğ M](#), [Korkusuz F](#).

Sport Management Program, Faculty of Health Sciences and Medicine, Bond University, Gold Coast, Australia. betulsekendiz@hotmail.com

Abstract

The purpose of this study was to investigate the effects of Swiss-ball core strength training on trunk extensor (abdominal)/flexor (lower back) and lower limb extensor (quadriceps)/flexor (hamstring) muscular strength, abdominal, lower back and leg endurance, flexibility and dynamic balance in sedentary women ($n = 21$; age = 34 ± 8.09 ; height = 1.63 ± 6.91 cm; weight = 64 ± 8.69 kg) trained for 45 minutes, 3 d·wk⁻¹ for 12 weeks. Results of multivariate analysis revealed significant difference ($p \leq 0.05$) between pre and postmeasures of 60 and 90° s trunk flexion/extension, 60 and 240° s⁻¹ lower limb flexion/extension (Biodex Isokinetic Dynamometer), abdominal endurance (curl-up test), lower back muscular endurance (modified Sorensen test), lower limb endurance (repetitive squat test), lower back flexibility (sit and reach test), and dynamic balance (functional reach test). The results support the fact that Swiss-ball core strength training exercises can be used to provide improvement in the aforementioned measures in sedentary women. In conclusion, this study provides practical implications for sedentary individuals, physiotherapists, strength and conditioning specialists who can benefit from core strength training with Swiss balls.

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