

POSTER: EFFECTS OF MOTOR TASKS WITH UNSTABLE TOOLS ON STATIC BALANCE AND SPEED WALKING IN OLDER WOMEN

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Objective: The aim of the study is to verify the effects of motor tasks with unstable tools on the static balance ability and on the walking speed in older women. **Methods:** A sample of 48 older women ($68,2 \pm 2.7$ years, 58.9 ± 5.4 kg, 157.5 ± 4.6) participated in the investigation; the sample was divided by randomizing within blocks into 2 groups: $n=25$ were included in the instability training group (IG) while $n=23$ were included in the control group (CG). The training period lasted 8 weeks, 3 sessions a week for a total of 24 sessions of about 50 minutes each. The tool used in the motor tasks was a plastic cylinder with water weighing about 4.8 kg (Slashpipe, Slashpipe GmbH, Essen, Germany). The following functional tests were used to evaluate motor capacity: Single Leg Stance Test (SLST) was presented for static balance evaluation; It detects the time at which the subject is able to keep the assigned task. The test was performed on both limbs, and measured with 1/10 second accuracy; the 8-Foot-Up-And-Go Test (8-FUAGT) was presented to evaluate speed walk; The time needed to perform the task measured with 1/10-second accuracy constitutes the test's result. For all the values obtained, the descriptive statistic (mean, standard deviation) was determined. A 2 (time) x 2 (group) mixed-model ANOVA was used to examine the data of both groups together (IG and CG) in the pre- and post-training time points (T0 vs T1) in order to determine the main and interactive effects of training. Statistical significance was set at ($p < 0.05$). **Results:** In the IG for right and left limb respectively, the SLST values showed a significant increase in support time equal to 26.5% and 16.2% ($p < 0.005$). In the IG the 8-FUAGT values showed a significant time decrease equal to 27% ($p < 0.005$). In both tests, the GC showed no significant changes. **Implications:** The introduction of instability tools seems to involve a high stress on the static and dynamic balance abilities; the dynamic balance seems capable of positively influencing the walking speed in the over 65 years old.