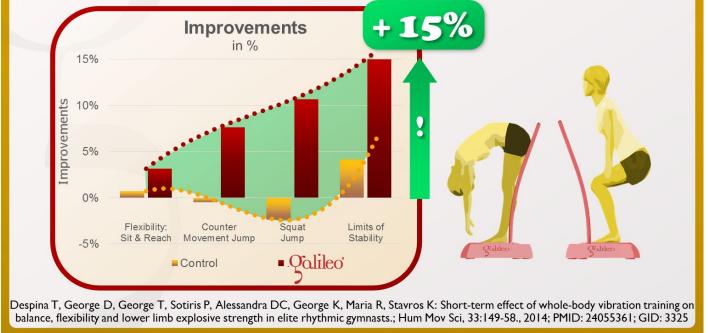
## Can 75 seconds of Galileo warm-up training Increase flexibility, performance and balance

### The answer is: YES

The study reported the immediate effects of 75 seconds of a special Galileo Based warm-up training on flexibility, jumping performance and balance in Olympic rhythmic gymnasts (5\*15 sec., 30Hz, pos. 2). The control group did the same 5 exercises without vibration. The Galileo group showed immediately and 15 min. after the exercises improvements of up to 15% while the control groups showed no significant improvements.



Galileo Research Fact Sheet #38

Sports & Fitness: Warmup & Balance

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# This study shows typical warm-up effects that can be achieved with Galileo Training. In this study 5 different exercises of 15 seconds each were used.

The control groups (the same individuals tested on another day before or after the Galileo Training day) did the identical exercises but without vibration.

The Galileo groups showed after only 75 seconds warm-up up to 15% improvements in jumping performance (counter movement jump, squat jump), flexibility (sit & reach test) and balance (limits of stability).

The positive effects were significant directly after the exercises as well as 15 minutes after the exercises. The control groups showed no significant improvements.

These reported effects are typical warm-up effects any user on the Galileo can experience if they do stretching exercises (e.g. between 16 and 20HZ) and deep squats or calf training (at 26 to 30Hz) for about 30 seconds per exercise.



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# Short-term effect of whole-body vibration training on balance, flexibility and lower limb explosive strength in elite rhythmic gymnasts.

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#### Abstract

The purpose of this study was to examine whether whole-body vibration (WBV) training results in short-term performance improvements in flexibility, strength and balance tests in comparison to an equivalent exercise program performed without vibration.

Eleven elite rhythmic gymnasts completed a WBV trial, and a control, resistance training trial without vibration (NWBV).

The vibration trial consisted of eccentric and concentric squatting exercises on a vibration platform that was turned on, whereas the NWBV involved the same training protocol with the platform turned off. Balance was assessed using the Rhythmic Weight Shift (RWS) based on the EquiTest Dynamic Posturography system; flexibility was measured using the sit & reach test, and lower limb explosive strength was evaluated using standard exercises (squat jump, counter movement jump, single leg squat).

All measurements were performed before (pre) immediately after the training program (post 1), and 15 minutes after the end of the program (post 15). Data were analyzed using repeated measures ANOVA was used with condition (WBV-NWBV) as the primary factor and time (pre, post 1, post 15) as the nested within subjects factor, followed by post-hoc pairwise comparison with Bonferroni corrections.

Results confirmed the hypothesis of the superiority of WBV training, especially in the post 15 measurement, in all flexibility and strength measures, as well as in a number of balance tests.

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