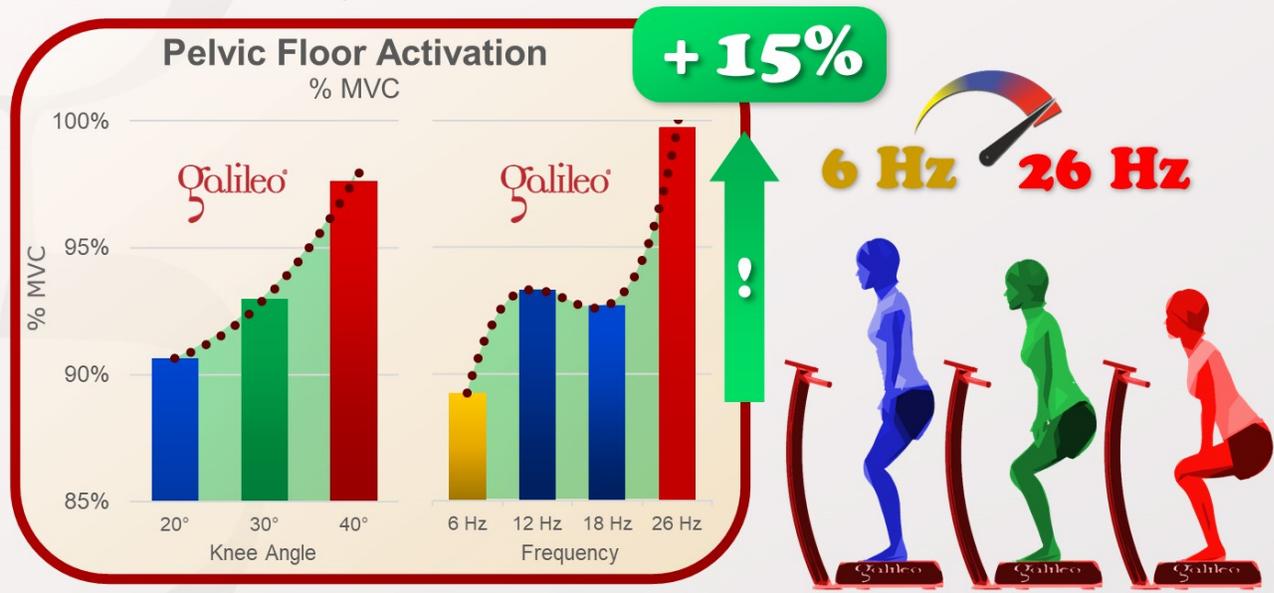


# Do higher frequencies and knee angles increase pelvic floor activation ?

## The answer is: YES

This study examined during Galileo Training the effects of increasing frequencies and higher squatting angles on pelvic floor activation (EMG in relation to MVC, maximum voluntary contraction) (6-26Hz, 20°-40° squat, Pos. 3). The study shows that increasing knee angles and especially increasing frequencies significantly increase pelvic floor muscle activation up to 15%.



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As [#GRFS3](#) and [#GRFS4](#) already showed, Galileo Training at high frequencies and deep squats significantly increase muscle activation (EMG).

This study focused on the effects of increasing frequencies and higher knee angles in squatting on pelvic floor muscles (6-26Hz, 20° to 40° knee angle, static squat, position 3).

Just like [#GRFS3](#) proved in general, lower squatting positions and especially high frequencies increase muscle activation during Galileo Training significantly.

Therefore pelvic floor training, increase of muscle volume and power should be performed at high frequencies (>25Hz).

In this study at 26Hz Galileo Training could activate the Pelvic Floor at almost 100% of MVC (maximum voluntary contraction)

– one of the reasons why Galileo Training is so effective for pelvic floor training.



[Med Sci Monit.](#) 2016 Oct 27;22:4030-4036.

## **Determining the Posture and Vibration Frequency that Maximize Pelvic Floor Muscle Activity During Whole-Body Vibration.**

Lee J<sup>1</sup>, Lee K<sup>1</sup>, Song C<sup>1</sup>.

### **Abstract**

**BACKGROUND** The aim of this study was to investigate the electromyogram (EMG) response of pelvic floor muscle (PFM) to whole-body vibration (WBV) while using different body posture and vibration frequencies.

**MATERIAL AND METHODS** Thirteen healthy adults (7 men, 6 women) voluntarily participated in this cross-sectional study in which EMG data from PFM were collected in a total of 12 trials for each subject (4 body postures, 3 vibration frequencies). Pelvic floor EMG activity was recorded using an anal probe. The rating of perceived exertion (RPE) was assessed with a modified Borg scale.

**RESULTS** We found that vibration frequency, body posture, and muscle stimulated had a significant effect on the EMG response. The PFM had high activation at 12 Hz and 26 Hz ( $p < 0.05$ ). PFM activation significantly increased with knee flexion ( $p < 0.05$ ). The RPE significantly increased with increased frequency ( $p < 0.05$ ).

**CONCLUSIONS** The knee flexion angle of 40° at 12 Hz frequency can be readily promoted in improving muscle activation during WBV, and exercise would be performed effectively. Based on the results of the present investigation, sports trainers and physiotherapists may be able to optimize PFM training programs involving WBV.

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