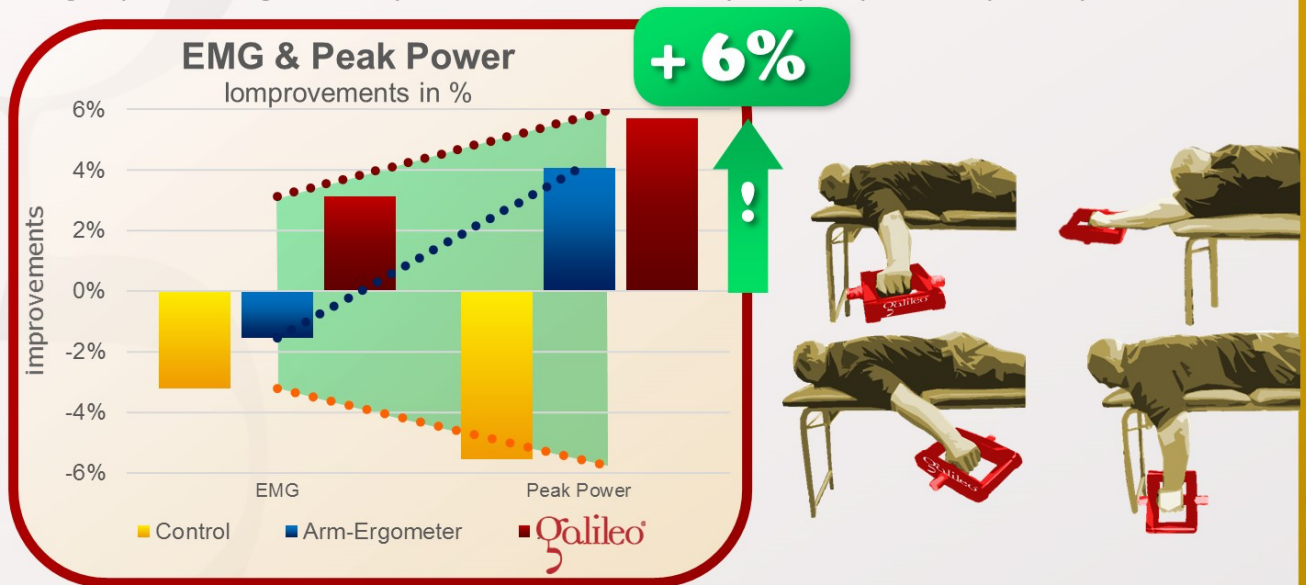


# Are 5 minutes Galileo Mano Training (Dumbbell) an effective warm up training ?

## The answer is: YES

This study reported the warming up effects of 5 minutes Galileo Mano Training (Galileo vibrating dumbbell) compared to static exercises and arm ergometer training (5\*1 min, 26Hz, 5 Exercises). The control groups performed the exercises without vibration or used an arm ergometer (5 Min., 25 W, 25 rpm). Only the Galileo group showed significant improvements in EMG intensity and peak power output of up to 6%.



Cochrane DJ, Stannard SR, Walmsely A, Firth EC: The acute effect of vibration exercise on concentric muscular characteristics; J Sci Med Sport., 11(6):527-34, 2008; PMID: 17714990; GID: 1945

As shown in [#GRFS60](#) Galileo Training can be used very effectively as a warm up exercise.

This study evaluated warm up effects for the Galileo Mano – the Galileo vibrating dumbbell. In principle exercises for arms and shoulders can be performed on the standard Galileo standing devices like for example push-ups (exercise 91/92) or dips (exercise 93). However, arm and shoulder applications using a Galileo (standing) vibration device is quite limited. However, using the Galileo Mano (a dumbbell with a vibrating handle) you can get better hand, arm and shoulder effects. In this study 5 different exercises at 26 Hz while lying flat on the stomach were used.

Each exercise was performed for 60 seconds so 5 minutes training in total. The control groups either performed the identical exercises without vibration or used an arm ergometer (“cycling for the arms”, 25W, 25rpm).

The Galileo groups showed the highest results with significant improvement in muscle activation (EMG) and peak power output (measured in pulling) of up to 6%. Another good example of how effective Galileo Training can be used also for preparing standard training programs.



[J Sci Med Sport](#). 2008 Nov;11(6):527-34. Epub 2007 Aug 21.

## **The acute effect of vibration exercise on concentric muscular characteristics.**

Cochrane DJ<sup>1</sup>, [Stannard SR](#), Walmsely A, [Firth EC](#).

### **Abstract**

This study was designed to compare the acute effect of vibration exercise with a concentric-only activity (arm cranking) on concentric-only muscle action using an upper body isoinertial exercise. Twelve healthy, physically active men, 30.0y+/-6.1 (mean+/-S.D.); height 1.81m+/-0.06; and weight 83.4kg+/-9.7, performed four maximal prone bench pull (PBP) efforts before and after a 5-min period of three different interventions: (1) acute vibration exercise (VBX); (2) arm cranking (AC); and (3) control (no exercise) (NVBX).

Electromyography (EMG) activity was assessed from the middle trapezius muscle during PBP. Acute VBX was induced with an electric-powered dumbbell (DB) (frequency 26Hz, amplitude 3mm), with 30-s exposures at five different shoulder positions. NVXB was performed with the participants holding the DB with the machine turned off, and AC was performed at 25W.

There was a significant (intervention x pre-post) interaction such that acute VBX and AC enhanced peak power by 4.8% ( $p < 0.001$ ) and 3.0% ( $p < 0.001$ ), respectively, compared to NVBX (-2.7%). However, there was no effect of any treatments on EMG activity compared to the control.

In conclusion, acute VBX provides an acute ergogenic effect which potentiates concentric-only muscle performance, though not to a significantly greater extent than concentric (arm cranking) exercise.

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