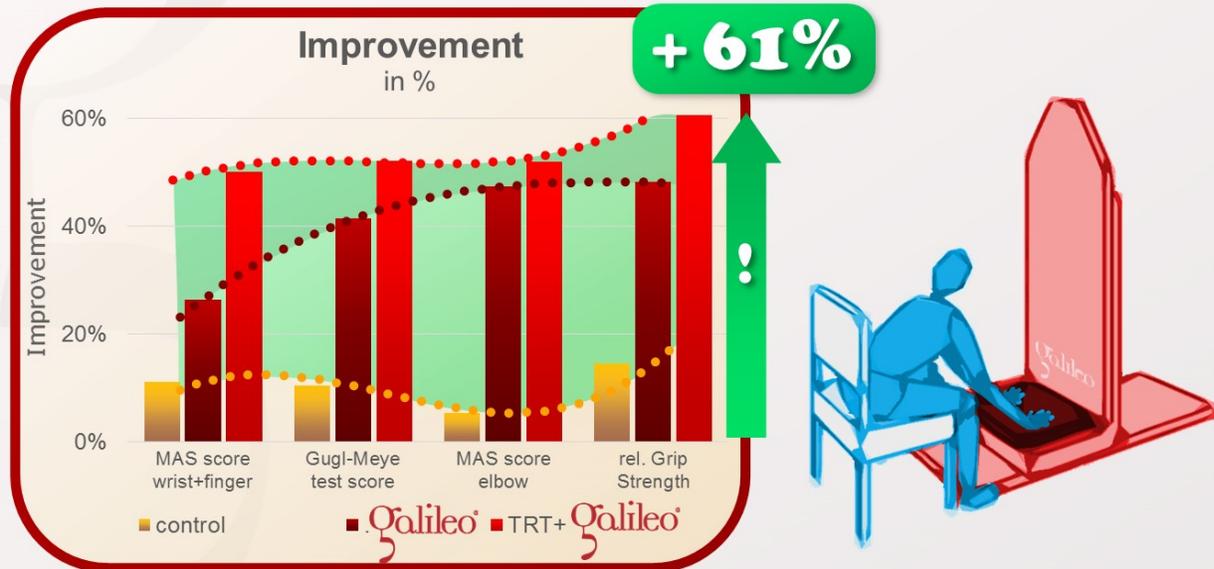


# Can Galileo Training reduce spasticity and increase grip strength in Stroke patients ?

## The answer is: YES

This study reports the effects of Galileo Training on spasticity (Stretching of hands with Galileo Med S Delta Table, 30 min., 5-15Hz, 3/week, 4 weeks). 3 groups: Std. therapy (60min.), std. therapy + Galileo (30+30min.) Galileo + Task Related Training (TRT) (30+30min.). The Galileo group showed significantly increased results compared to control, the combination of Galileo and TRT further increased effects by an average of 25%.



Lee JS et.Al.: Short-Term Effects of Whole-Body Vibration Combined with Task-Related Training on Upper Extremity Function, Spasticity, and Grip Strength in Subjects with Poststroke Hemiplegia: A Pilot Randomized Controlled Trial.; Am J Phys Med Rehabil, 95(8):608-17, 2016; PMID: 26829094; GID: 4077

Galileo Research Fact Sheet #40

Therapy: Stroke

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**While for this special application the Galileo Mano Dumbbell was designed, nevertheless this research group from Korea showed even a Galileo Delta tilt-table can be used effectively to reduce spasticity and improve function in hand and shoulder of a Stroke patients.**

And this study is also a nice example how Galileo Training should be integrated in a therapy concept: The combination of Galileo Training and additional functional training showed the best results. Why?

The answer is quite obvious: Galileo Training is very effective in (re-)establishing neuromuscular functions and in reducing and controlling spasticity. Additionally, the high repetition training provides many more muscle contractions in a short period of time increasing plasticity and neural communication.

However, these new functions need to be incorporated into every-day living and this can be done by functional training after Galileo-Training.

As mentioned in [#GRFS30](#) and [#GRFS15](#) only if the neuromuscular functions established by Galileo are used in everyday movements they will become long-term functional changes.



[Am J Phys Med Rehabil](#). 2016 Aug;95(8):608-17. doi: 10.1097/PHM.0000000000000454.

## **Short-Term Effects of Whole-Body Vibration Combined with Task-Related Training on Upper Extremity Function, Spasticity, and Grip Strength in Subjects with Poststroke Hemiplegia: A Pilot Randomized Controlled Trial.**

Lee JS<sup>1</sup>, Kim CY, Kim HD.

### **Abstract**

#### **OBJECTIVE:**

The aim of this study was to determine the effect of whole-body vibration training combined with task-related training on arm function, spasticity, and grip strength in subjects with poststroke hemiplegia.

#### **DESIGN:**

Forty-five subjects with post-stroke were randomly allocated to 3 groups, each with 15 subjects as follows: control group, whole-body vibration group, and whole-body vibration plus task-related training group. Outcome was evaluated by clinical evaluation and measurements of the grip strength before and 4 weeks after intervention.

#### **RESULTS:**

Our results show that there was a significantly greater increase in the Fugl-Meyer scale, maximal grip strength of the affected hand, and grip strength normalized to the less affected hand in subjects undergoing the whole-body vibration training compared with the control group after the test. Furthermore, there was a significantly greater increase in the Wolf motor function test and a decrease in the modified Ashworth spasticity total scores in subjects who underwent whole-body vibration plus task-related training compared with those in the other 2 groups after the test.

#### **CONCLUSIONS:**

The findings indicate that the use of whole-body vibration training combined with task-related training has more benefits on the improvement of arm function, spasticity, and maximal grip strength than conventional upper limb training alone or with whole-body vibration in people with post-stroke hemiplegia.

PMID: 26829094 DOI: [10.1097/PHM.0000000000000454](#)