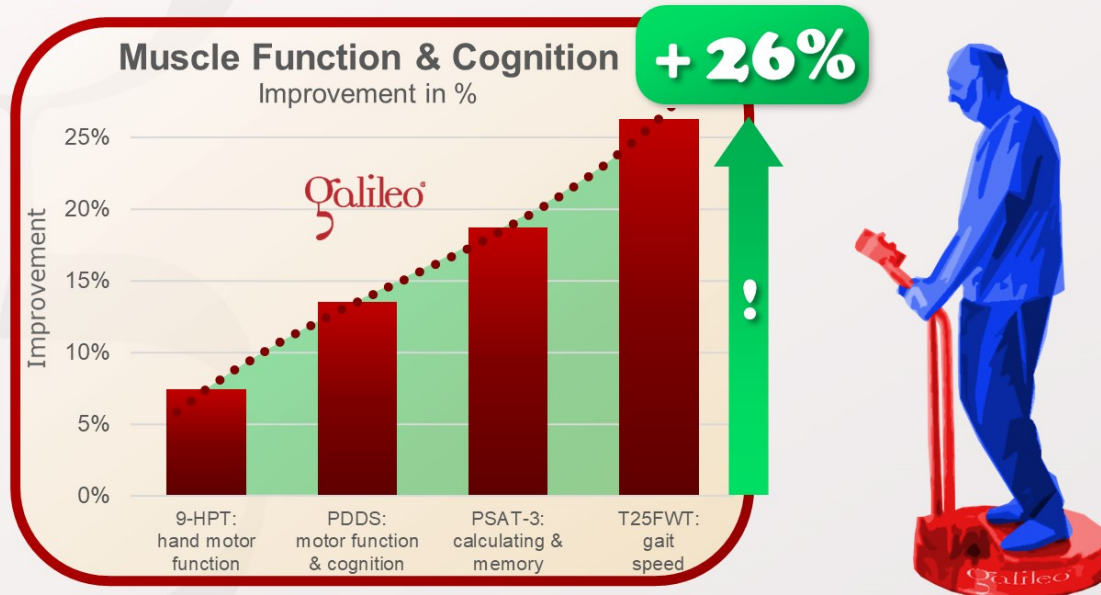


# Can Galileo Training improve muscle function and cognition in MS patients ?

## The answer is: YES

This study investigated the effects of 8 weeks of Galileo Training on the disability status of MS (Multiple Sclerosis) patients (20Hz, pos. 1.5, 5\*1 min., 3/week, 8 weeks, 20° bent legs). The results show significant improvements in muscle function, cognition and disability status: +0,4 points motor function & cognition, +8% hand motor function, +14% disability status, +19% calculating & memory +26% gait speed.



Yang F, Estrada EF, Sanchez MC: Vibration training improves disability status in multiple sclerosis: A pretest-posttest pilot study.; J Neurol Sci, 369():96-101, 2016; PMID: 27653872; GID: 4248

This study shows the positive effects of only 8 week (24 session of 5\*1 minutes) Galileo Training on muscle function, cognition and disability status in MS (Multiple Sclerosis) patients (20Hz, Position 1.5, 20° bent legs, 5 \* 1 minutes, 3 session per week over 8 weeks).

The results show significant improvements in hand function (+8%), motor function & cognition (+14%), calculation abilities and short-term memory (+18%) and gait speed (+26%).

This relation between cognition and motor function is obvious in many disease conditions: in chronic disease children for example cognitive function improve with effective Galileo Training and the resulting improvements in coordination and motor function.



[J Neurol Sci](#). 2016 Oct 15;369:96-101. doi: 10.1016/j.jns.2016.08.013. Epub 2016 Aug 5

## **Vibration training improves disability status in multiple sclerosis: A pretest-posttest pilot study.**

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### **Abstract**

The purpose of this study was to examine the effects of an 8-week vibration training program on changing the disability level in people with multiple sclerosis (MS).

Twenty-five adults with clinically-confirmed MS underwent an 8-week vibration training on a side-alternating vibration platform. The vibration frequency and peak-to-peak displacement were set at 20Hz and 2.6mm, respectively. Prior to and following the training course, the disability status was assessed for all participants characterized by the Patient Determined Disability Steps (PDDS) and MS Functional Composite (MSFC) scores.

The training program significantly improved the PDDS ( $3.66 \pm 1.88$  vs.  $3.05 \pm 1.99$ ,  $p=0.009$ ) and the MSFC scores ( $0.00 \pm 0.62$  vs  $0.36 \pm 0.68$ ,  $p < 0.0001$ ).

All three MSFC components were improved: lower extremity function ( $9.37 \pm 4.92$  vs.  $8.13 \pm 4.08$ s,  $p=0.011$ ), upper extremity function (dominant hand:  $27.81 \pm 5.96$  vs.  $26.20 \pm 5.82$ s,  $p=0.053$ ; non-dominant hand:  $28.47 \pm 7.40$  vs.  $27.43 \pm 8.33$ s,  $p=0.059$ ), and cognitive function ( $30.55 \pm 13.54$  vs.  $36.95 \pm 15.07$  points,  $p=0.004$ ).

Our findings suggested that vibration training could be a promising alternative modality to reduce the disability level among people with MS.

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