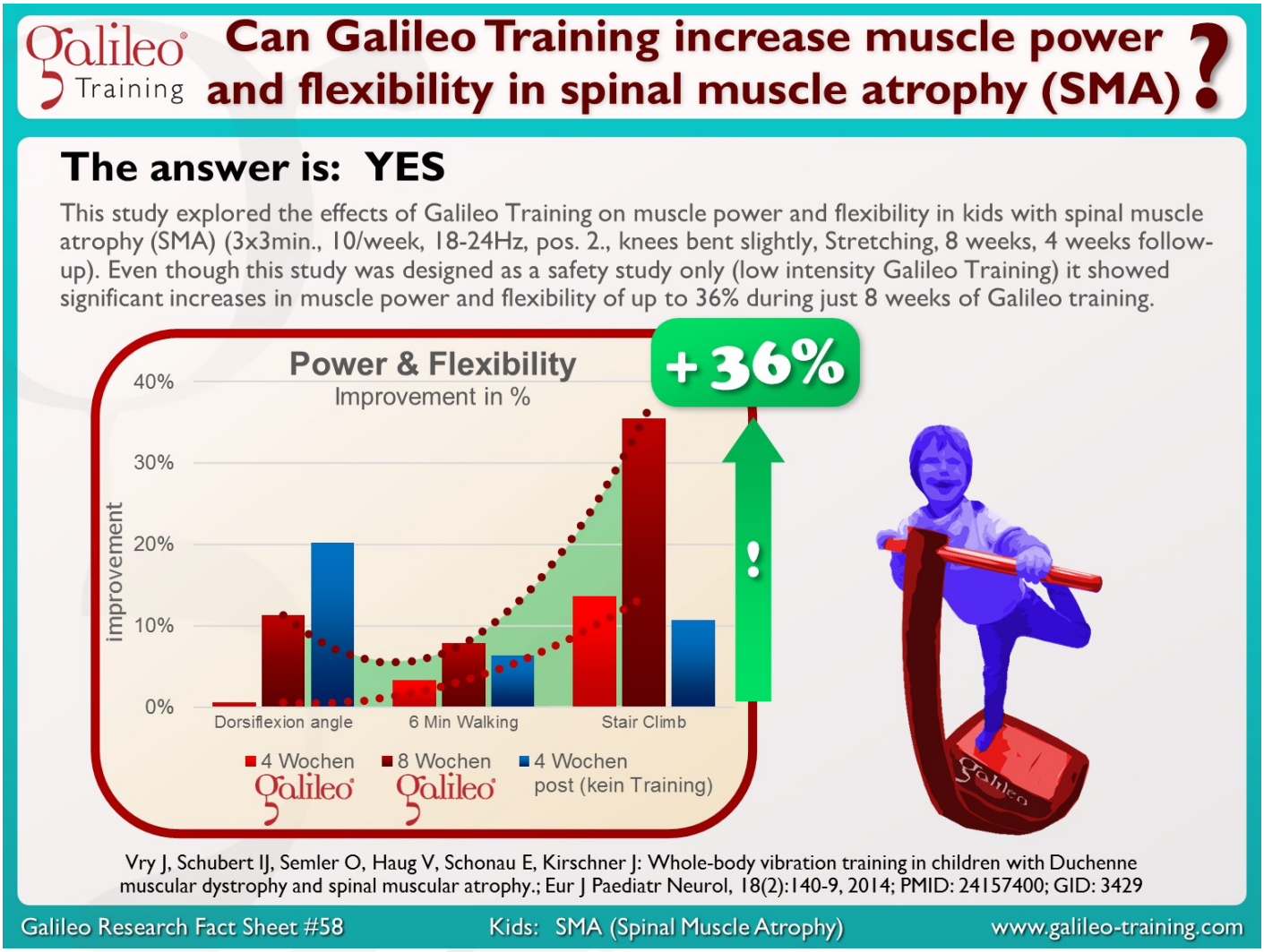

Can Galileo Training increase muscle power and flexibility in spinal muscle atrophy (SMA)?

This study showing the effects of Galileo training in Duchenne muscular dystrophy (# GRFS57) also examined SMA (spinal muscular atrophy) patients. Significant improvements in muscle function and flexibility were also shown.

The results were even greater with up to 36% improvement in the case of SMA than in Duchenne patients. As mentioned in # GRFS57, this study was actually a study designed to ensure the safety of Galileo training for these special patient groups. Accordingly, simple and less demanding exercises were chosen.

All the more remarkable is the significant improvement that can be achieved in the short period of 8 weeks (9 minutes, 10 times a week): e.g. An improvement of 36% for stairs and an improvement of 12% for flexibility (dorsiflexion). For further studies and, above all, for an optimal individual therapy, it makes more sense to translate specific exercises that are precisely adapted to the patient's current therapy program and use while training on Galileo for increased effects.

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Whole-body vibration training in children with Duchenne muscular dystrophy and spinal muscular atrophy.

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INTRODUCTION:

Whole-body-vibration training is used to improve muscle strength and function and might therefore constitute a potential supportive therapy for neuromuscular diseases.

OBJECTIVE:

To evaluate safety of whole-body vibration training in ambulatory children with Duchenne muscular dystrophy (DMD) and spinal muscular atrophy (SMA).

METHODS:

14 children with DMD and 8 with SMA underwent an 8-week vibration training programme on a Galileo MedM at home (3 × 3 min twice a day, 5 days a week). Primary outcome was safety of the training, assessed clinically and by measuring serum creatine kinase levels. Secondary outcome was efficacy as measured by changes in time function tests, muscle strength and angular degree of dorsiflexion of the ankles.

RESULTS:

All children showed good clinical tolerance. In boys with DMD, creatine kinase increased by 56% after the first day of training and returned to baseline after 8 weeks of continuous whole-body vibration training. No changes in laboratory parameters were observed in children with SMA. Secondary outcomes showed mild, but not significant, improvements with the exception of the distance walked in the 6-min walking test in children with SMA, which rose from 371.3 m to 402.8 m ($p < 0.01$).

INTERPRETATION:

Whole-body vibration training is clinically well tolerated in children with DMD and SMA. The relevance of the temporary increase in creatine kinase in DMD during the first days of training is unclear, but it is not related to clinical symptoms or deterioration.

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