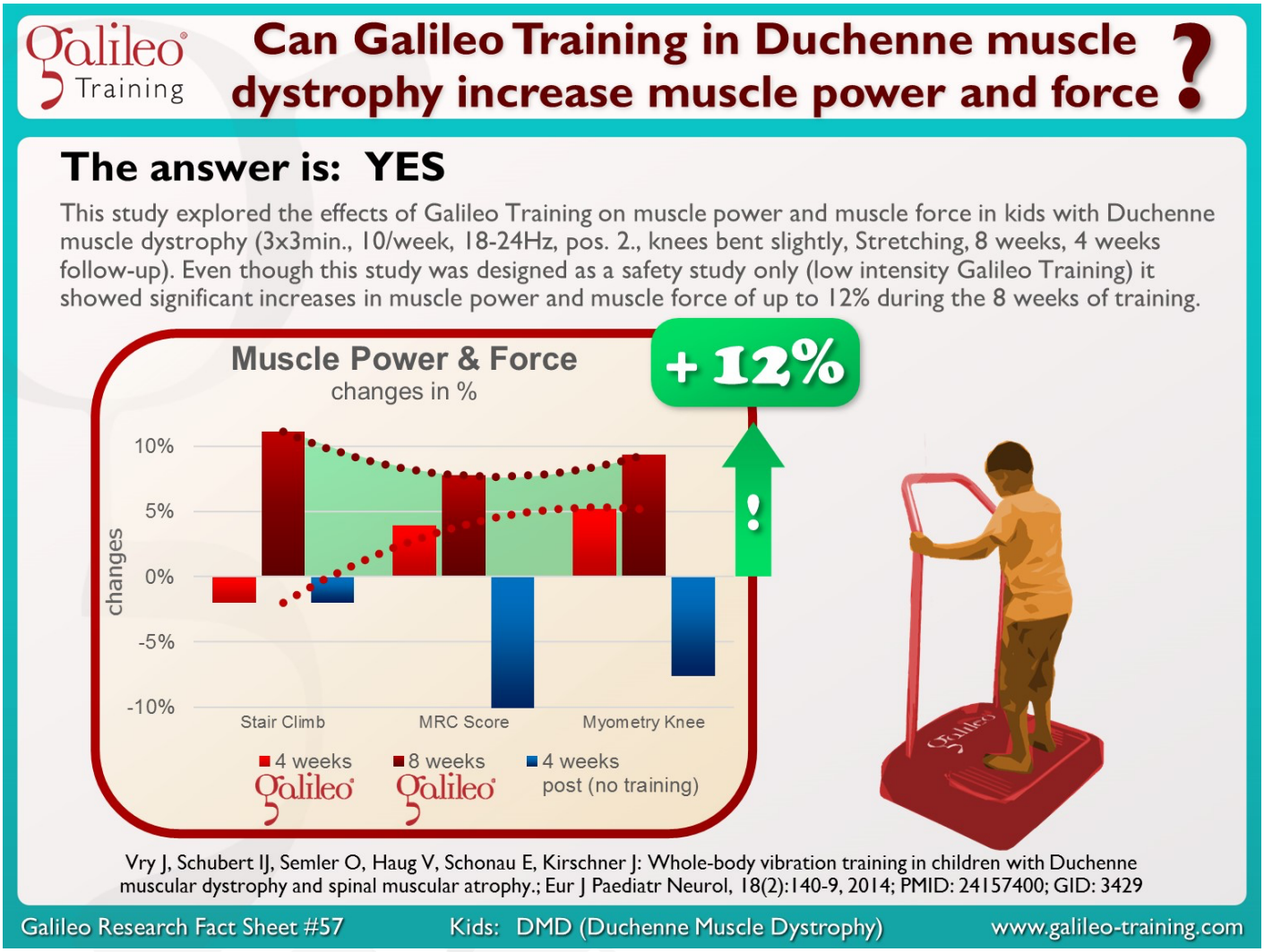

For a long time, medicine assumed that in some rare disease like Duchenne muscle dystrophy (DMD, a genetic predisposition which causes muscle loss) any kind of muscle training would cause negative effects.

However, any disuse (not using a function regularly and not using it at high enough intensity) leads to loss of the function – therefore, it is very unlikely that using a function and therefore training should always be contra-productive.

This study showed that Galileo Training over a period of 8 weeks significantly increases muscle power and muscle force of up to 12% in Duchenne patients age 6 to 18.

This is quite remarkable considering that this was a pre study only designed to prove that Galileo Training is safe in Duchenne patients and therefore the setup and exercises used were simple low intensity exercises.

Eur J Paediatr Neurol. 2014 Mar;18(2):140-9. doi: 10.1016/j.ejpn.2013.09.005. Epub 2013 Oct 11.

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.

PMID:24157400 DOI: 10.1016/j.ejpn.2013.09.005