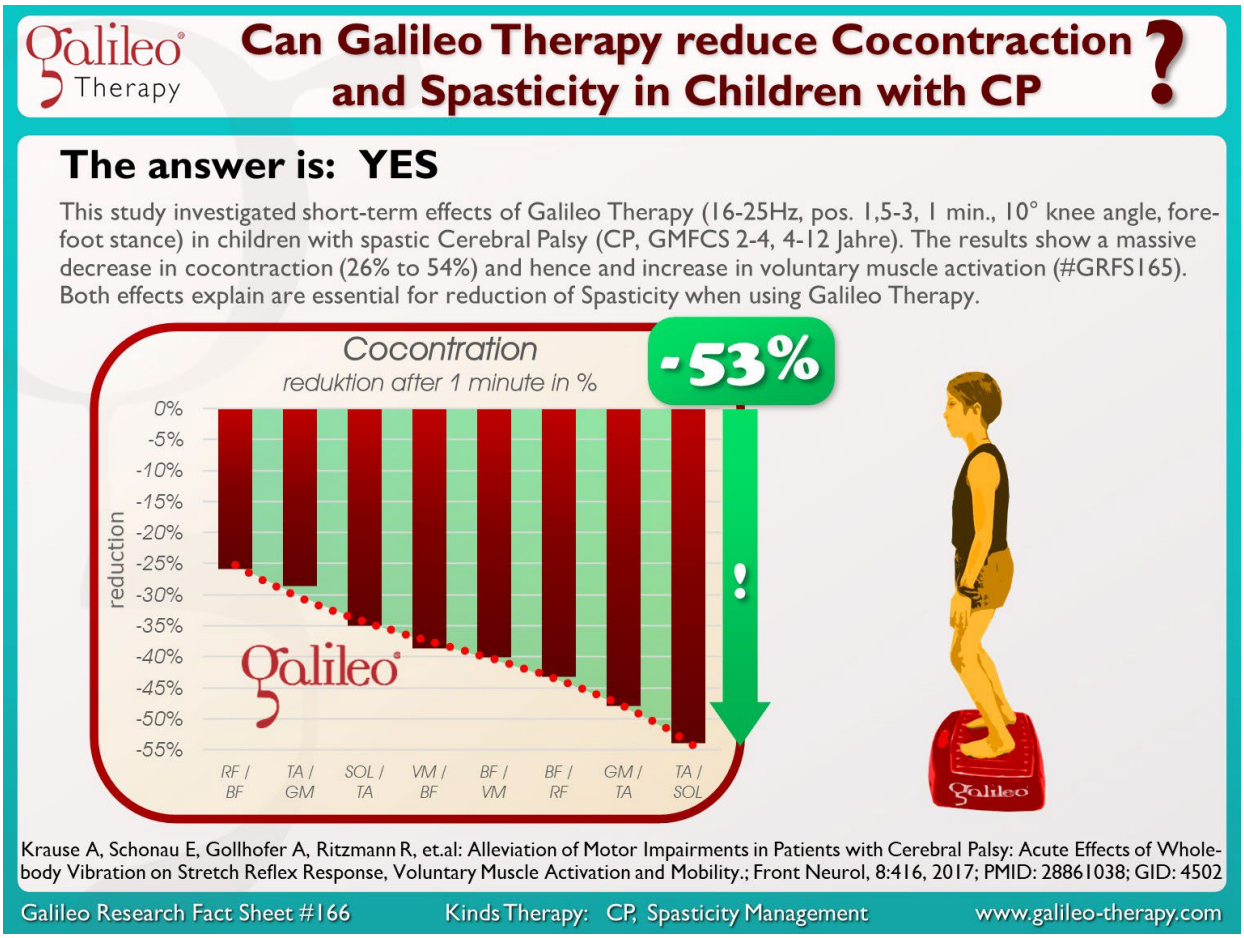
Galileo Research Fact Sheet #166: Can Galileo Therapy reduces Contraction and Spasticity in Children with CP?



This very interesting study was done in cooperation of the group around Prof. Gollhofer (Sport Institute University of Freiburg) and the one around Prof. Schoenau (University Clinic of Cologne, Cologne Concept). It investigated the short-term effects of Galileo Therapy in children with Cerebral Palsy (CP, GMFCS 2-4, age 4-12 years) on reflexes, voluntary muscle activation and voluntary range of motion. The used exercise was very basic (16-25Hz, pos. 1,5-3, 1 min., almost upright standing on fore-feet, 10° knee angle). Outcome parameters where targeting muscle function (also see #GRFS165) like contraction of different muscle groups of the ankle and knee joints.

The results after only one minute of Galileo application where remarkable: Reduction of contraction depending on the individual muscle groups by 26% to 54% (an explanation for this effect can be found in #GRFS165). Increased muscle tone - and in the extreme case spasticity - is a typical consequence of lack of voluntary activation. The resulting contraction in principle helps to stabilize the joints, but also decreases muscle function and active range of motion – on the other hand, a reduction of contraction increases movement efficiency and as shown in this case increase active range of motion by 15%.

Together with other studies (#GRFS37, #GRFS74, #GRFS105) showing that 1 minute of Galileo Therapy reduce spinal sensitivity (sensitivity of the reflexes to external mechanical stimulation) and at the same time increase voluntary access (#GRFS74), this study therefore explains the background of short-term effects of Galileo Therapy and why Galileo Therapy therefore can so effectively be used to reduce spasticity. It also explains why Galileo Therapy can open up a

therapeutic window which should be used for more specific Galileo exercises or also for other therapy types.

Kids Therapy - CP, Spasticity Management
#GRFS166 #GRFS