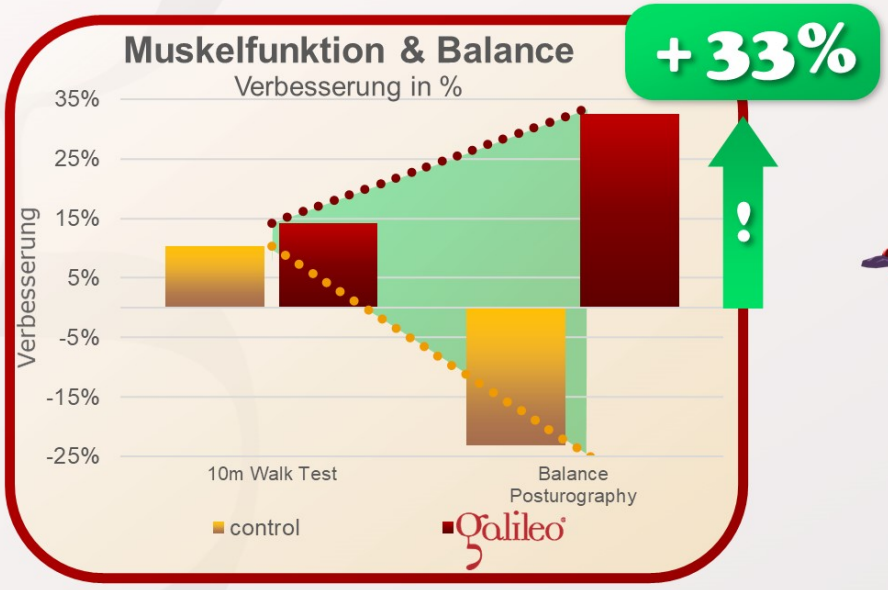
Can Galileo Training improve balance and muscle function in Parkinson's patients ?

The answer is: YES

This study documented the effects of Galileo Training on muscle function and balance in Parkinson's patients (25 Hz, pos. 3-5, 2x15 min/day, 3 weeks). Both groups received 40 min. 5/week physio therapy (relaxation, stretching, body perception), one group received additional Galileo Training. The Galileo group showed significant improvements in 10 min. gait distance and massive improvements in balance up to 33%.



Ebersbach G, Edler D, Kaufhold O, Wissel J.: Whole body vibration versus conventional physiotherapy to improve balance and gait in Parkinson's disease.; Arch Phys Med Rehabil., 89(3):399-403, 2008; PMID: 18295614; GID: 1285

Galileo Research Fact Sheet #88 Therapie: Parkinson's Disease www.galileo-training.com

This study investigates the effects of 3 weeks of Galileo Training on gait distance and balance in Parkinson's patients.

Both groups received an extensive physio therapy concept focusing on flexibility, stretching, balance and body perception (40 minutes, 5/week).

The Galileo group received additional 2*15 minutes, 5/week Galileo Training (25Hz, position 3-5, slightly bent legs).

The Galileo group showed a significantly increased walking distance and especially when comparing to the control group a remarkable improvement in balance by up to 33%.

Like in many studies a very simple training protocol was chosen – more specific exercises targeting the different therapy goals (muscle power, flexibility, balance) using appropriate straining frequencies (#GIS1) would have been even more effective (e.g. balance <10Hz, stretching 16..20Hz, muscle power >25Hz but deeper squats to address upper legs and Gluteus)

Arch Phys Med Rehabil. 2008 Mar;89(3):399-403. doi: 10.1016/j.apmr.2007.09.031.

Whole body vibration versus conventional physiotherapy to improve balance and gait in Parkinson's disease.

Ebersbach G[1], Edler D, Kaufhold O, Wissel J.

OBJECTIVE: To compare the effects of whole body vibration (WBV) and conventional physiotherapy (PT) on levodopa-resistant disturbances of balance and gait in idiopathic Parkinson's disease (PD).

DESIGN: Randomized controlled rater-blinded trial comparing 2 active interventions, final follow-up assessment 4 weeks after termination of active intervention.

SETTING: Specialized referral center, hospitalized care.

PARTICIPANTS: Patients with PD and dopa-resistant imbalance on stable dopamine replacement medication (N=27) were randomized (intent-to-treat population) to receive WBV (n=13) or conventional PT (controls, n=14). Twenty-one patients (per protocol population) completed follow-up (14 men, 7 women; mean age, 73.8 y; age range, 62-84 y; mean disease duration, 7.2 y; mean dopa-equivalent dose, 768 mg/d).

INTERVENTION: Subjects were randomized to receive 30 sessions (two 15-min sessions a day, 5 days a week) of either WBV on an oscillating platform or conventional balance training including exercises on a tilt board. Twenty-one subjects (10 with WBV, 11 controls) were available for follow-up 4 weeks after treatment termination.

MAIN OUTCOME MEASURES: The primary measure was Tinetti Balance Scale score. Secondary clinical ratings included stand-walk-sit test, walking velocity, Unified Parkinson's Disease Rating Scale (section III motor examination) score, performance in the pull test, and dynamic posturography.

RESULTS: The Tinetti score improved from 9.3 to 12.8 points in the WBV group and from 8.3 to 11.7 in the controls. All secondary measures, except posturography, likewise improved at follow-up compared with baseline in both groups. Quantitative dynamic posturography only improved in patients with WBV (1937-1467 mm) whereas there was no significant change in controls (1832-2030 mm).

CONCLUSIONS: Equilibrium and gait improved in patients with PD receiving conventional WBV or conventional PT in the setting of a comprehensive rehabilitation program. There was no conclusive evidence for superior efficacy of WBV compared with conventional balance training.

PMID: 18295614