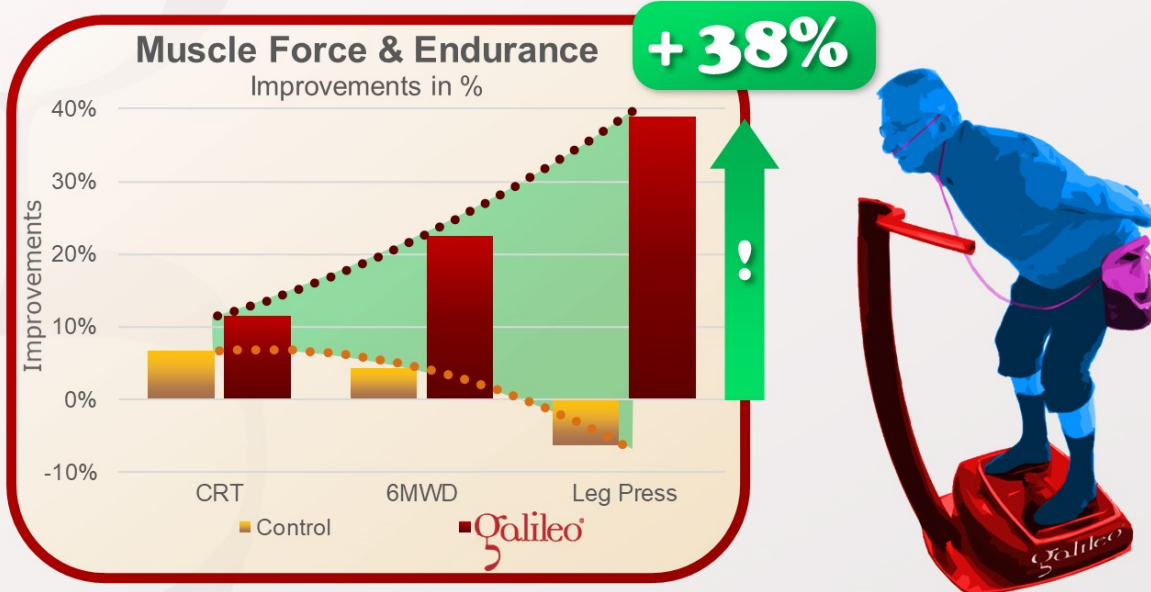




Can Galileo Therapy improve muscle force and endurance in COPD-patients ?

The answer is: YES

This study investigated the effects of Galileo Therapy in COPD patients. (6-24Hz, 3*3 min., progressive, 150° squat, pos.2-3, 2/week, 3 months, +15 min. warmup+cool-down). The control group received Calisthenics exercises (2*30 min./week). While the control group did not show any significant changes that Galileo group showed highly significant improvements in muscle force and endurance with up to +38% (leg press, 1RM).



Spielmanns M, Boeselt T, Gloeckl R, Polanski H, Nell C, Storre JH, Windisch W, Koczulla AR, et. al: Low-Volume Whole-Body Vibration Training Improves Exercise Capacity in Subjects With Mild to Severe COPD.; Respir Care, 62(3):315-323, 2017; PMID: 27923937; GID: 4329

Galileo Research Fact Sheet #124

Therapy: COPD, Power & Endurance

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[Respir Care](#). 2017 Mar;62(3):315-323. doi: 10.4187/respcare.05154. Epub 2016 Dec 6.

Low-Volume Whole-Body Vibration Training Improves Exercise Capacity in Subjects With Mild to Severe COPD.

[Spielmanns M](#)^{1,2}, [Boeselt T](#)³, [Gloeckl R](#)⁴, [Klutsch A](#)⁵, [Fischer H](#)⁶, [Polanski H](#)⁵, [Nell C](#)⁶, [Storre JH](#)^{7,8}, [Windisch W](#)^{2,7}, [Koczulla AR](#)³.

BACKGROUND:

The objective of this study was to investigate the benefits of a low-volume out-patient whole-body vibration training (WBVT) program on exercise capacity in comparison with a calisthenics training program in subjects with COPD.

METHODS:

In this single-center randomized controlled trial, 29 subjects with mild to severe COPD were randomized to WBVT or to calisthenics training, including relaxation and breathing retraining in combination with calisthenics exercises. Both groups equally exercised for duration of 3 months with 2 sessions of 30 min/week.

Outcome parameters were 6-min walk distance (6MWD, primary outcome), 5-repetition sit-to-stand test, leg press peak force, Berg balance scale, St George Respiratory Questionnaire, and COPD assessment test.

RESULTS:

Twenty-seven subjects completed the study (WBVT, $n = 14$; calisthenics training program, $n = 13$). Baseline characteristics between groups were comparable.

Subjects in the WBVT group significantly improved median (interquartile range) 6MWD (+105 [45.5-133.5] m, $P = .001$), sit-to-stand test (-2.3 [-3.1 to -1.3] s, $P = .001$), peak force (28.7 [16.7-33.3] kg, $P = .001$), and Berg balance scale (1.5 [0.0-4.0] points, $P = .055$).

Changes in 6MWD, sit-to-stand test, and leg press peak force were also found to be significantly different between groups in favor of the WBVT group. Only the between-group difference of the COPD assessment test score was in favor of the calisthenics training group ($P = .02$).

CONCLUSIONS:

A low-volume WBVT program resulted in significantly and clinically relevant larger improvements in exercise capacity compared with calisthenics exercises in subjects with mild to severe COPD. (ClinicalTrials.gov registration DRKS9706.).

PMID: 27923937 DOI: [10.4187/respcare.05154](https://doi.org/10.4187/respcare.05154)