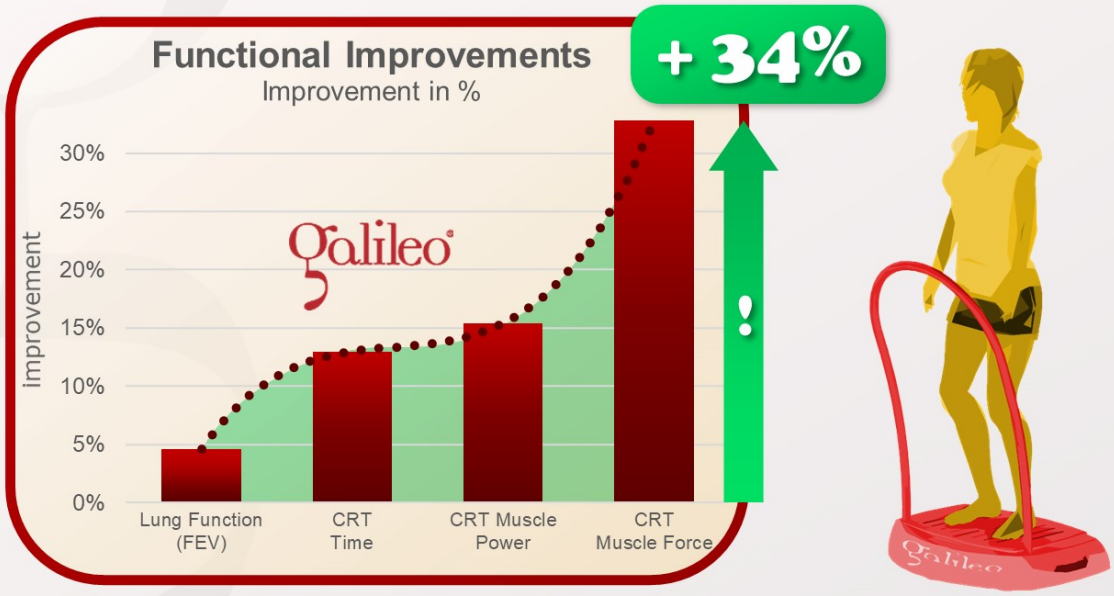
Can Galileo Therapy increase muscle and lung function in Cystic Fibrosis patients?

The answer is: YES

This study investigated the effects of Galileo Therapy on lung and muscle function of adult Cystic Fibrosis patients (age 24-47, 20-25Hz, pos. 1, 10*3 min./week, 3 months). The results showed that Galileo Therapy could significantly improve lung function (+5%) and muscle function e.g. in the chair rising test (CRT) in muscle power (+16%) and muscle force (+34%).



Rietschel E, van Koningsbruggen S, Fricke O, Semler O, Schoenau E: Whole body vibration: a new therapeutic approach to improve muscle function in cystic fibrosis; Int J Rehabil Res., 31(3):253-6, 2008; PMID: 18708849; GID: 1786

Galileo Research Fact Sheet #120 Therapy: Cystic Fibrosis, Muscle Function www.galileo-therapy.com

This study examined the effects of 3 months of Galileo therapy on muscle function and lung function in adult cystic fibrosis patients (ages 24-47).

Cystic fibrosis is a hereditary metabolic disorder in which respiration by u.A. is greatly impaired by slime formation.

Patients were given 2 times a day, 3 times a week, 3 * 3 minutes Galileo therapy at 20-25Hz for 3 months.

As a result, a significant improvement in lung function by + 5% (respiratory volume) as well as muscle function, e.g. the Chair Rising Test (CRT) with 13% less stand-up time, 16% muscle power and 34% muscle power.

The results of this study are comparable to effects of Galileo therapy in COPD (Chronic Obstructive Bronchitis, # GRFS107, # GRFS41, # GRFS34, # GRFS32).

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Whole body vibration: a new therapeutic approach to improve muscle function in cystic fibrosis?

Rietschel E[1], van Koningsbruggen S, Fricke O, Semler O, Schoenau E.

Disease progression in cystic fibrosis (CF) leads to muscle wasting and loss of muscle function. The aim of this prospective pilot study was to evaluate the effects of whole body vibration (WBV) on muscle function in adult patients with CF.

Ten patients (three males; seven females) of the CF Center Cologne, Germany, have completed the 3-month study (age: 24-47 years; forced expiratory volume in 1 s (FEV1) 17-109% predicted (49+/-29) and body mass index (BMI) 16.6-24.4 kg/m2 (19.3+/-2.5).

WBV was provided by a vibration platform (Galileo 2000). The patients were standing in an upright position receiving vertical vibration of frequencies between 20 and 25 Hz.

The vibration exercise evokes muscle contractions via stretch reflexes improving muscular activity.

The training schedule consisted of three 3-min sessions twice a day, 5 days per week for 3 months. Every 4 weeks the following tests were carried out: FEV1, forced vital capacity (FVC), BMI, chair-rising test (CRT), one-leg and two-leg jump test as well as maximal isometric grip force.

The local ethics committee has approved the study. After 3 months of WBV all parameters in the CRT significantly improved: chair-rising time (P=0.03), maximal force (P=0.02), maximal power (P=0.01) as well as velocity (P=0.02).

The peak jump force (P=0.02) and velocity (P=0.01) of the two-leg jump significantly improved.

Parameters in the one-leg jump as well as maximal isometric grip force showed no significant improvement. Weight and BMI showed a slightly positive trend whereas FEV1 and FVC did not significantly change.

Any change in mechanographic parameters did not correlate with FEV1 or FVC in this study. These results demonstrate that WBV can improve muscle function in CF patients.

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