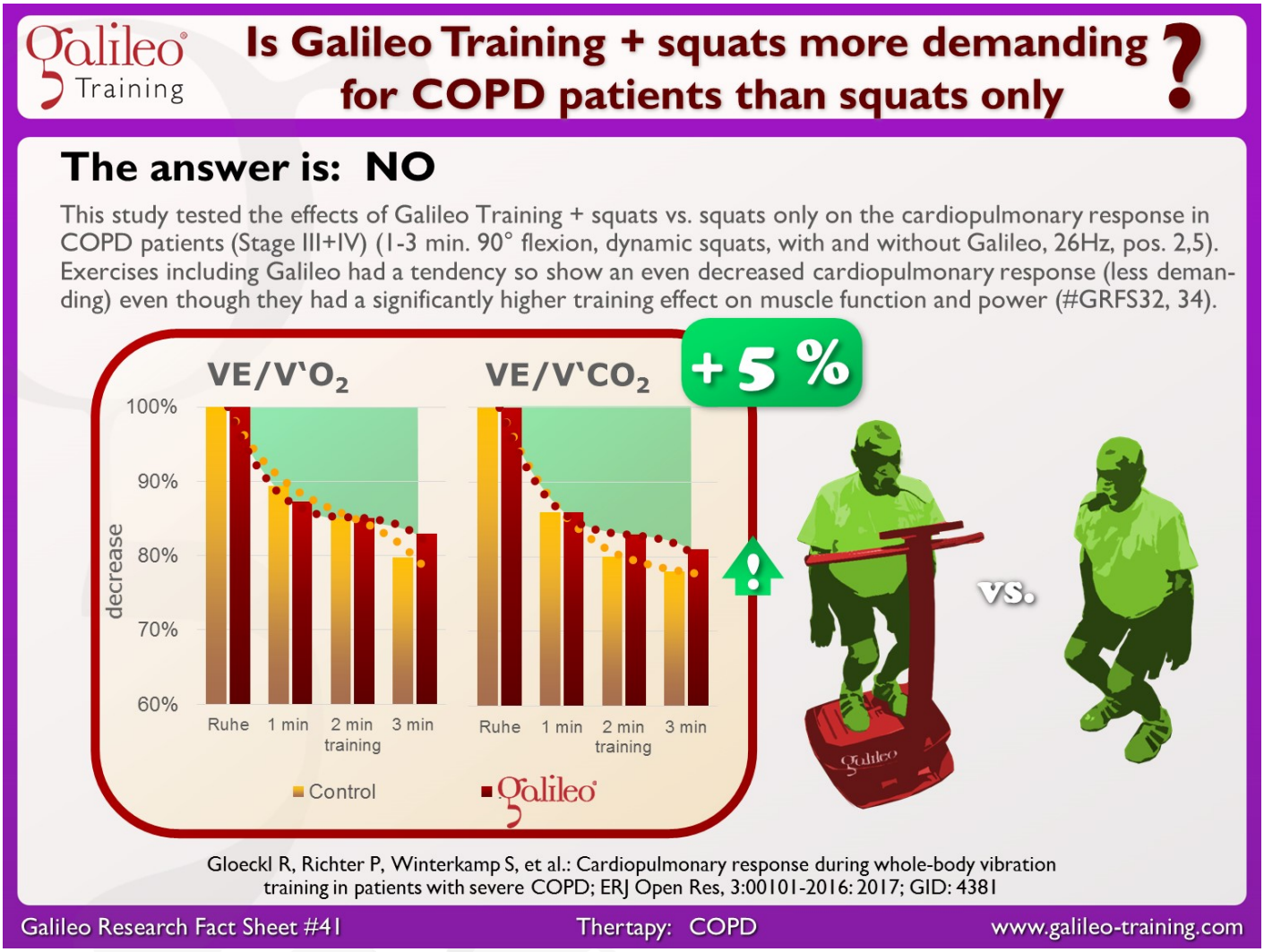

Another very interesting study of the group around Dr. Gloeckl. Their focus in former publications was therapy of COPD patients – some of them even after lung-transplant.

They could show the significant higher training effects when using Galileo in COPD therapy (#GRFS37#GRFS32) also after lung-transplant (#GRFS31). They showed huge effects on muscle force, power and endurance (e.g. increased 6-minute walking test).

This study now focuses more on a safety aspect and has shown that the identical squat-exercise when combined with Galileo Training at high frequencies (in this case 26Hz) was not more demanding for lung and heart participants but had a tendency to be even slightly less demanding.

Even though Galileo-Training was less demanding on participants the combined squat with Galileo showed significantly higher training effects than the squat itself ! (#GRFS37 #GRFS32)

Cardiopulmonary response during whole-body vibration training in patients with severe COPD

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ABSTRACT

Several studies in patients with chronic obstructive pulmonary disease (COPD) have shown that whole-body vibration training (WBVT) has beneficial effects on exercise capacity. However, the acute cardiopulmonary demand during WBVT remains unknown and was therefore investigated in this study.

Ten patients with severe COPD (forced expiratory volume in 1 s: 38±8% predicted) were examined on two consecutive days. On day one, symptom-limited cardiopulmonary exercise testing was performed on a cycle ergometer. The next day, six bouts of repeated squat exercises were performed in random order for one, two or three minutes either with or without WBVT while metabolic demands were simultaneously measured.

Squat exercises with or without WBVT induced comparable ventilatory efficiency (minute ventilation (VE)/carbon dioxide production (V′CO2): 38.0±4.4 with WBVT Versus 37.4±4.1 without, p=0.236). Oxygen uptake after 3 min of squat exercises increased from 339±40 mL·min−1 to 1060±160 mL·min−1 with WBVT and 988±124 mL min−1 without WBV (p=0.093). However, there were no significant differences between squat exercises with and without WBVT in oxygen saturation (90±4% versus 90±4%, p=0.068), heart rate (109±13 bpm versus 110±15 bpm, p=0.513) or dyspnoea (Borg scale 5±2 versus 5±2, p=0.279).

Combining squat exercises with WBVT induced a similar cardiopulmonary response in patients with severe COPD compared to squat exercises without WBVT. Bearing in mind the small sample size, WBVT might be a feasible and safe exercise modality even in patients with severe COPD.

Whole-body vibration training is a feasible and safe exercise modality even in patients with severe COPD