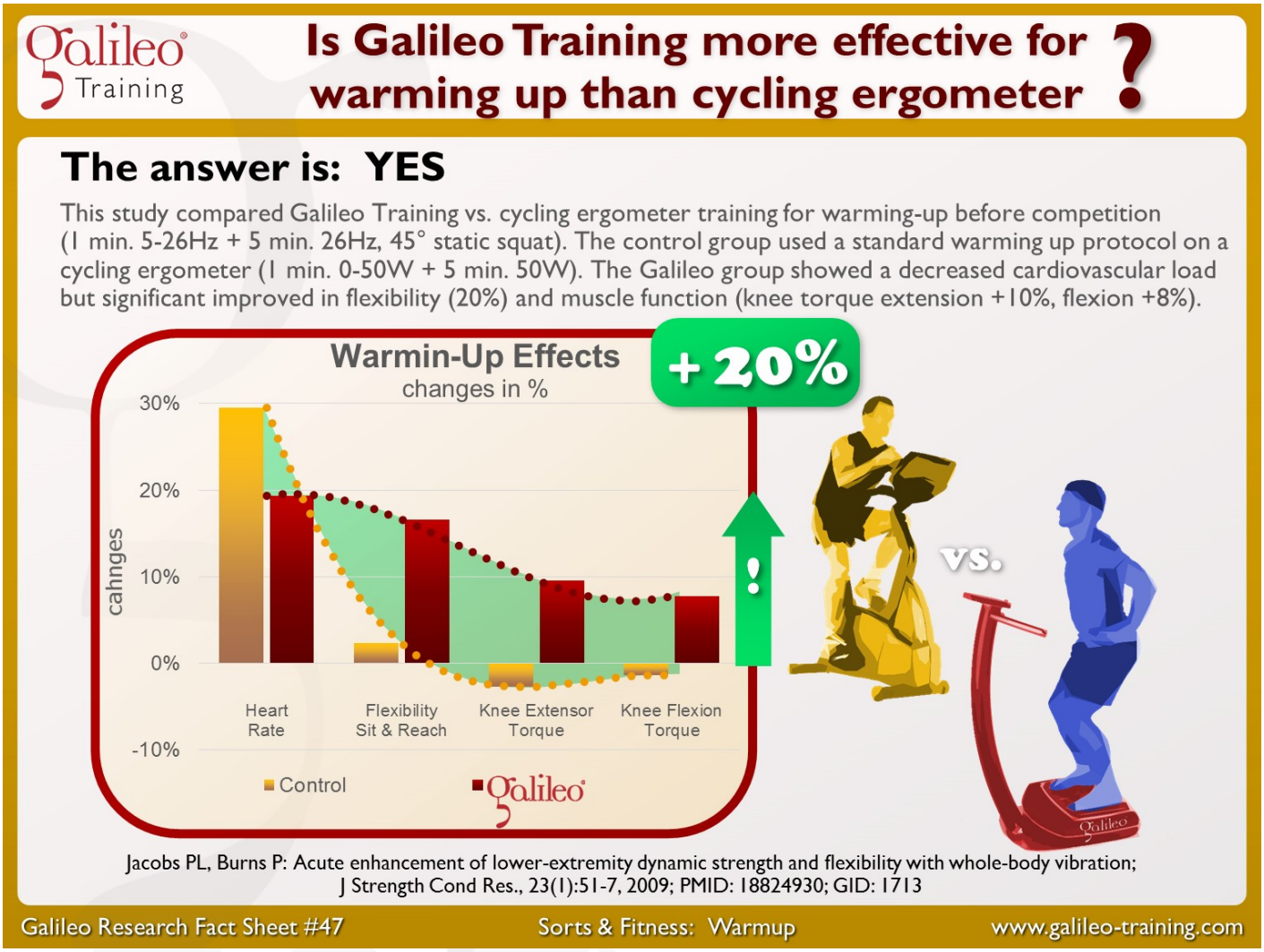

Galileo Training can be used very effectively as a general warming up protocol.

Warming up is important especially for athletes – but many standard warm up protocols like this cycling ergometer protocol are ineffective for flexibility and even muscle function (e.g. torque/force) especially when compared to Galileo Training.

In this study it compared the immediate effects of a warm up protocol on Galileo (45° static squat, 1 Minute increasing frequency from 5 to 36Hz, then 5 minutes at 26Hz) versus a standard ergometer protocol (1 minute 0 to 50W than 5 minutes at 50W.

While the ergometer protocol only improves the heart-rate, Galileo Training could improve flexibility by 20% and knee torque by 8% to 10% - interestingly at a lower cardiovascular load. As shown in many studies (e.g. #GRFS19, #GRFS38),

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Acute enhancement of lower-extremity dynamic strength and flexibility with whole-body vibration.

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Abstract

The purpose of this investigation was to examine the acute effects of whole-body vibration (WBV) on muscular strength, flexibility, and heart rate (HR).

Twenty adults (10 men, 10 women) untrained to WBV participated in the study. All subjects completed assessment of lower-extremity isokinetic torque, flexibility, and HR immediately before and after 6 minutes of WBV and 6 minutes of leg cycling ergometry (CYL), in randomized order.

During WBV, subjects stood upright on a vibration platform for a total of 6 minutes. Vibration frequency was gradually increased during the first minute to a frequency of 26 Hz, which was maintained for the remaining 5 minutes. During CYL, power output was gradually increased to 50 W during the first minute and maintained at that power output for the remaining 5 minutes. Lower-extremity flexibility was determined using the sit-and-reach box test. Peak and average isokinetic torque of knee extension and flexion were measured by means of a motor-driven dynamometer with velocity fixed at 120 degrees. Change scores for the outcome measures were compared between treatments using Student's paired t-tests.

Analysis revealed significantly greater HR acceleration with CYL (24.7 bpm) than after WBV (15.8 bpm). The increase of sit-and-reach scores after WBV (4.7 cm) was statistically greater ($p < 0.05$) than after CYL (0.8 cm).

After WBV, increases in peak and average isokinetic torque of knee extension, 7.7% and 9.6%, were statistically greater than after CYL ($p < 0.05$). Average torque of knee flexion also increased more with WBV (+7.8%) than with CYL (-1.5%) ($p < 0.05$).

The findings of this study indicate that short-term WBV standing elicits acute enhancements of lower-extremity muscular torque and flexibility, suggesting the application of this technology as a preparatory activity before more intense exercise.