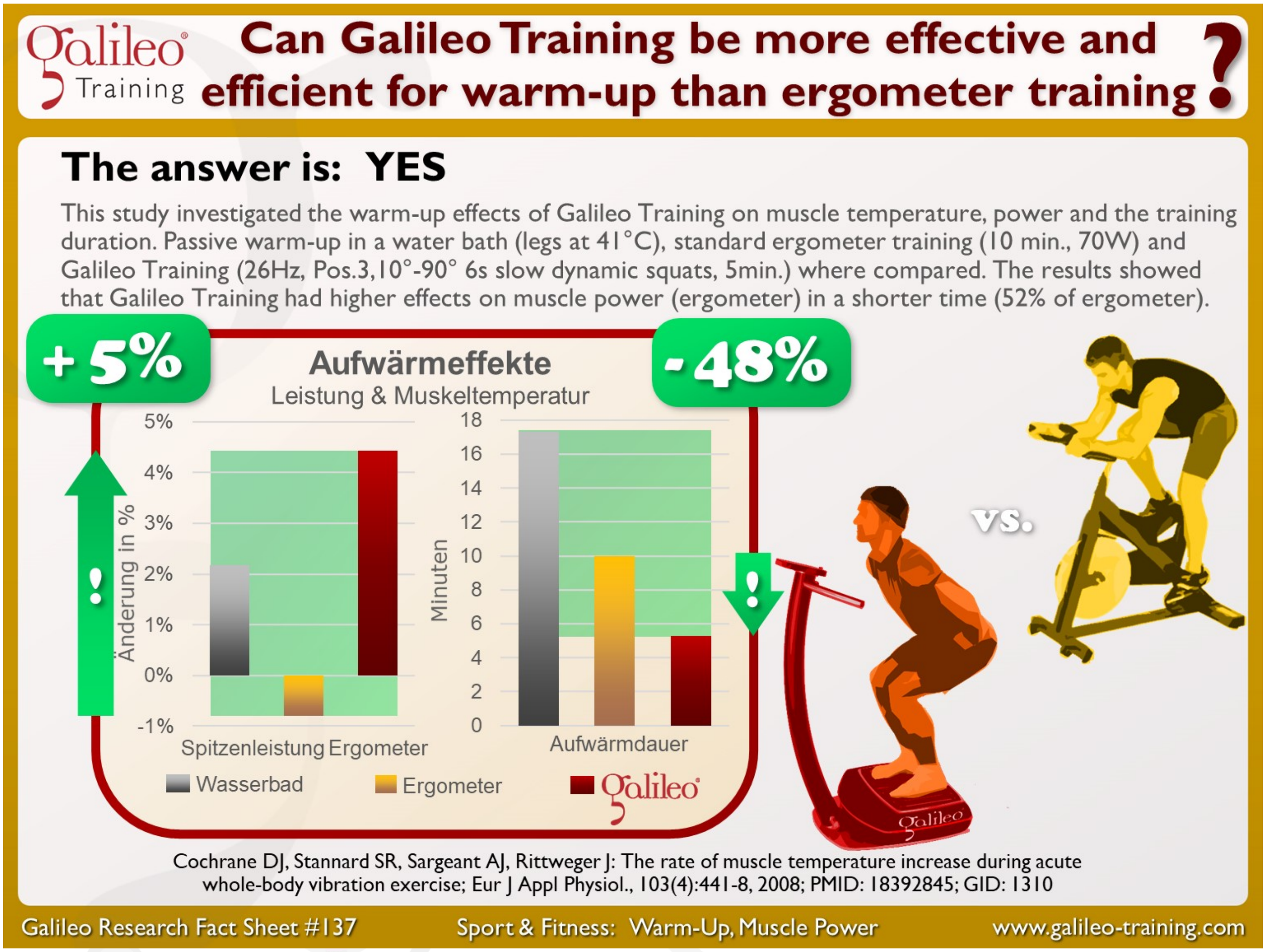

This study investigated the warm-up effects of Galileo Training concerning muscle temperature, muscle power and training duration.

The study compared standard cycling ergometer training (10 minutes at 70W), passive warm up in a water bath (legs in 41°C water) and Galileo Training (26 Hz, position 3, slow dynamic squats, 10°-90°, 6 seconds per prepetition for about 5 minutes).

Interestingly a significant part of the warm-up effects could be achieved by passive warming up of the muscles.

The over-all study results showed that Galileo Training resulted in higher effects on muscle power (isokinetic maximum ergometer power) in a much shorter time (5 minutes compared to 10 and 17 minutes).

In this study Galileo Training was therefore not only mare efficient but also more effective than traditional ergometer training.

These study results are backed-up by other Galileo studies (#GRFS129, #GRFS61, #GRFS60, #GRFS47, #GRFS38) reporting warm-up effects on flexibility, muscle power and balance.

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The rate of muscle temperature increase during acute whole-body vibration exercise.

Cochrane DJ[1], Stannard SR, Sargeant AJ, Rittweger J.

This study compared the rate of muscle temperature (Tm) increase during acute whole-body vibration (WBV), to that of stationary cycling and passive warm-up.

Additionally we wanted to determine if the purported increase in counter-movement jump and peak power cycling from acute WBV could be explained by changes in muscle temperature.

Eight active participants volunteered for the study, which involved a rest period of 30 min to collect baseline measures of muscle, core, skin temperature, heart rate (HR), and thermal leg sensation (TLS), which was followed by three vertical jumps and 5 s maximal cycle performance test.

A second rest period of 40 min was enforced followed by the intervention and performance tests. The change in Tm elicited during cycling was matched in the hot bath and WBV interventions.

Therefore cycling was performed first, proceeded by, in a random order of hot bath and acute WBV.

The rate of Tm was significantly greater ($P < 0.001$) during acute WBV (0.30 degree C min(-1)) compared to cycle (0.15 degree C min(-1)) and hot bath (0.09 degree C min(-1)) however there was no difference between the cycle and hot bath, and the metabolic rate was the same in cycling and WBV (19 mL kg(-1) min(-1)).

All three interventions showed a significant ($P < 0.001$) increase in countermovement jump peak power and height.

For the 5 s maximal cycle test (MIC) there were no significant differences in peak power between the three interventions. In conclusion, acute WBV elevates Tm more quickly than traditional forms of cycling and passive warm-up.

Given that all three warm-up methods yielded the same increase in peak power output, we propose that the main effect is caused by the increase in Tm.

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