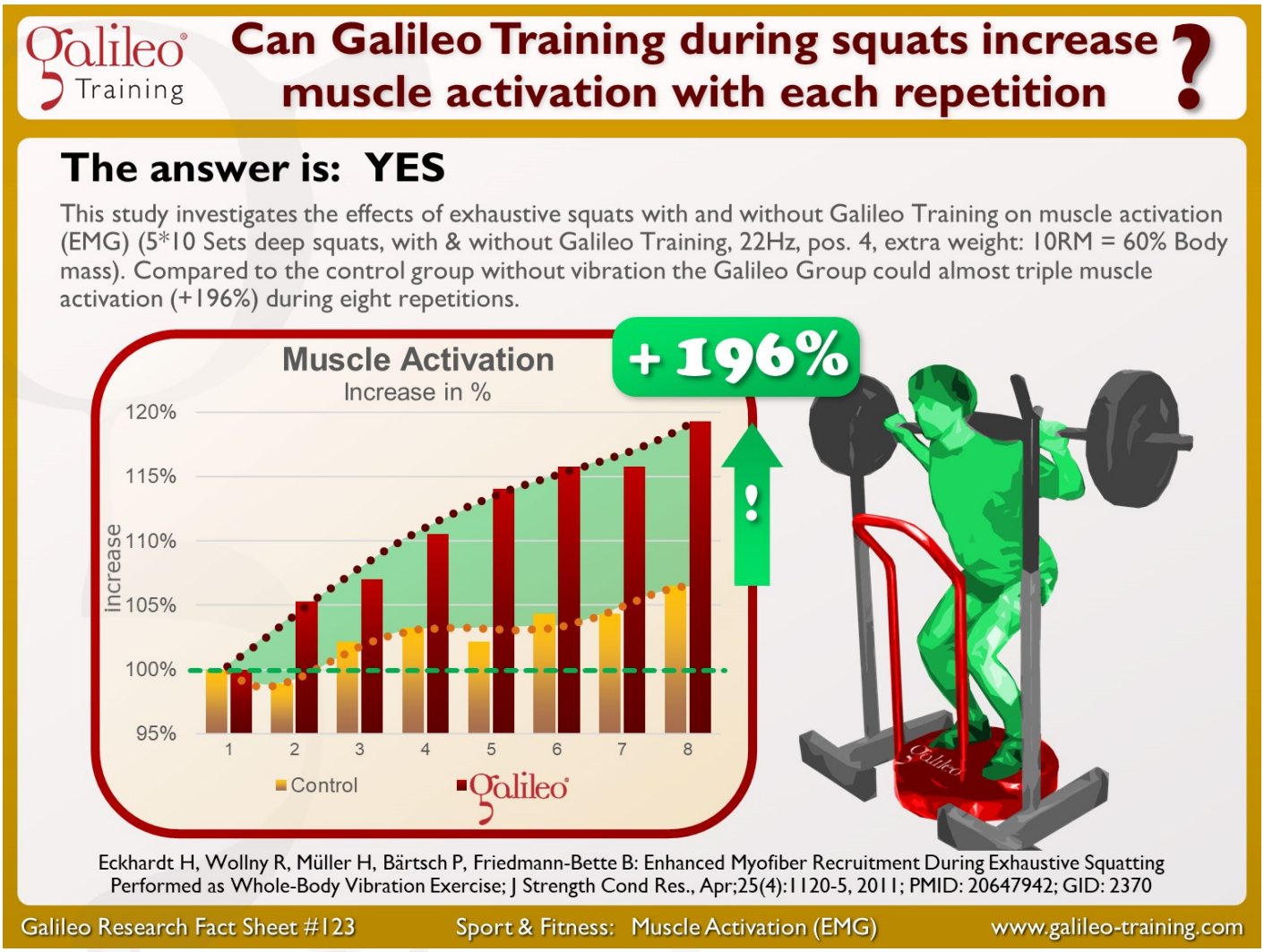

This study examined the effect of 8 consecutive intense squats with and without Galileo training on muscle activation (EMG).

Both groups performed 5 sets of 10 reps with an additional weight equal to the individual 10 repetition maximum (10RM) – in this case, an average of 60% of body mass.

In addition to muscle activation after each of the 5 sets (EMG, see # GRFS100) and blood lactate (# GRFS119), muscle activation (EMG) was also studied during one set.

The results show that the increase during Galileo training on average was almost three times higher (+ 196%) than without Galileo training.

Another indication that training in combination with Galileo can be significantly more effective than without and can thus complement wonderfully classic training in sports and fitness.

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Enhanced myofiber recruitment during exhaustive squatting performed as whole-body vibration exercise.

Eckhardt H[1], Wollny R, Müller H, Bärtsch P, Friedmann-Bette B.

The purpose of the study was to test the hypothesis that myofiber recruitment is enhanced when whole-body vibration (WBV) is added to squat training. In a randomized cross-over design, 14 recreationally active men were subjected to 2 sessions consisting of 5 sets of 10 squats with external load, performed either on a vibration platform (whole-body vibration squatting [WBVS]) or conventionally without WBV (CON).

Electromyographic (EMG) activity of the right vastus lateralis muscle was continuously recorded during WBVS and CON. The integrated EMG values were normalized to the EMG activity recorded during measurement of the maximal voluntary contraction force (MVC) on an isometric leg press at the beginning of each training session.

Capillary lactate concentration was determined before and repeatedly after the squatting exercise.

Overall mean normalized and integrated EMG (nIEMG) activity during WBVS (62 ± 4% MVC) was significantly ($p < 0.001$) higher compared with CON (47 ± 2% MVC). There was a tendency for nIEMG to increase during the 5 sets of 10 squats performed as WBVS ($p = 0.089$), whereas there was a significant ($p < 0.001$) decrease in nIEMG during CON.

Whole-body vibration squatting induced a significantly ($p < 0.001$) larger increase in capillary lactate than CON (3.03 ± 0.32 vs. 1.60 ± 0.30 mmol · L(-1), $p < 0.001$).

The increased myoelectric activity and the enhanced exercise-induced increase in capillary lactate concentration during WBVS provide evidence for augmented recruitment of muscle tissue when WBV is added to exhaustive squatting exercise.

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