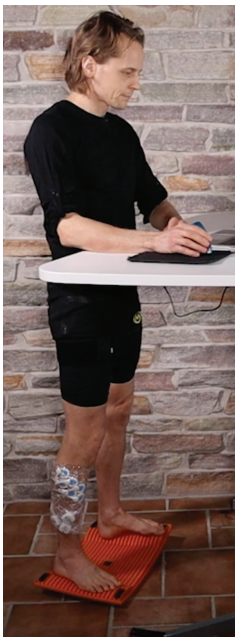

DOES GYMBA USE INCREASE MUSCLE ACTIVITY AMPLITUDE AND VARIABILITY DURING OFFICE WORK?

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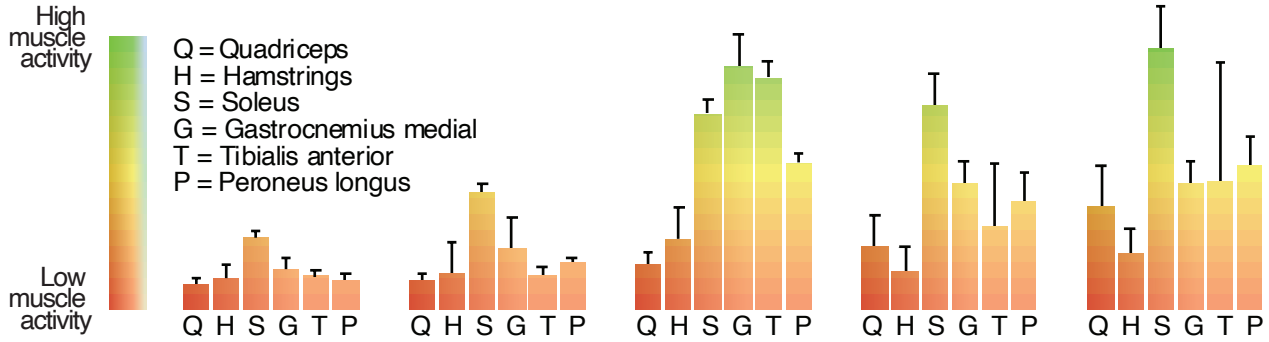
The risk of metabolic, cardiovascular and musculoskeletal disorders is higher when spending prolonged times sitting - but also prolonged, static standing can be harmful. Several dynamic standing options, like standing boards, have been introduced to mitigate the musculoskeletal risks, and to amplify the possible metabolic benefits of standing. Gymba is an activation board designed to enable multi-dimensional and walking-like movements during standing, e.g. while working at a stand-up desk.

The aim of this pilot study was to compare, during office work, muscle activity amplitude and variability of casual (intuitional use of the board) and active Gymba use (encouraged active use of the board) to work done sitting, working at a stand-up desk, or walking, in three recreationally active adults. The muscle activity amplitude indicates the total activity of muscles, and variability the muscle activity changes during these activity periods.

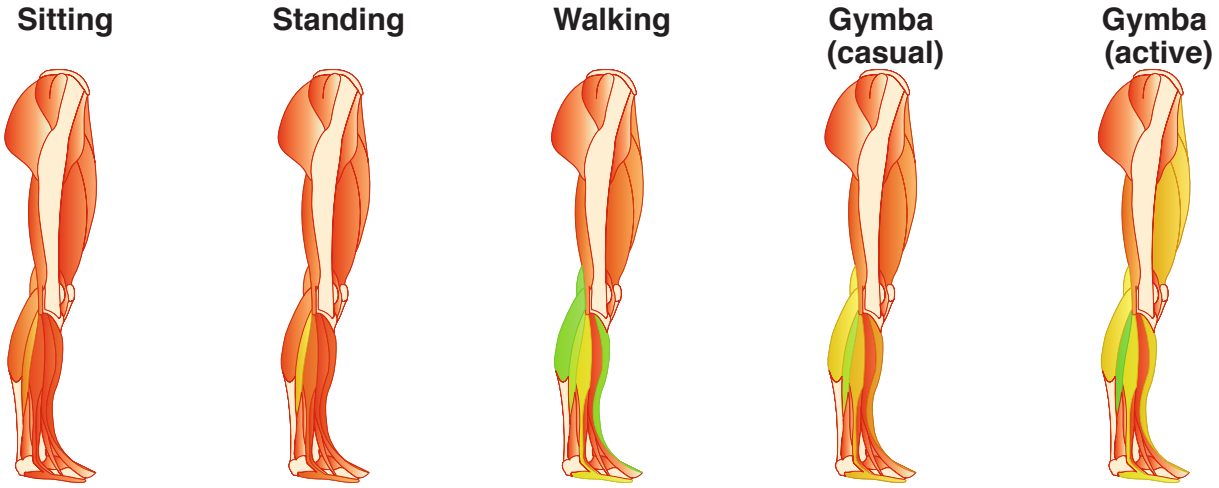
Compared to sitting, casual and active Gymba use increased thigh muscle activity with 82% and 194%, and calf muscle activity with 204% and 290%, respectively (Muslce activity amplitude figure and graphic). Compared to standing, casual and active Gymba use increased thigh muscle activity with 62% and 162%, and calf muscle activity with 115% and 181%, respectively. When compared to walking, thigh muscles were equally or 58% more active, but calf muscles 34% or 15% less active during casual and active Gymba use, respectively. Muscle activity variability was largely comparable during walking and Gymba use (Muscle activity variability graphic).

This small-scale pilot study suggests that Gymba use at a stand-up desk is more active than standing, and for thigh muscles at least as active as walking. Using Gymba during office work may therefore promote metabolic health, while mitigating the musculoskeletal risks associated with prolonged sitting and standing.

Muscle activity amplitude figure



Muscle activity amplitude graphic



Muscle activity variability graphic