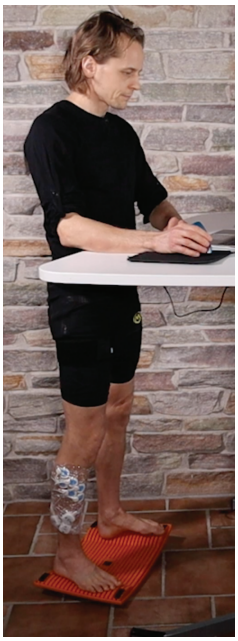

DOES GYMBA USE INCREASE MUSCLE ACTIVITY AMPLITUDE AND VARIABILITY? COMPARISONS TO SITTING, STANDING AND WALKING

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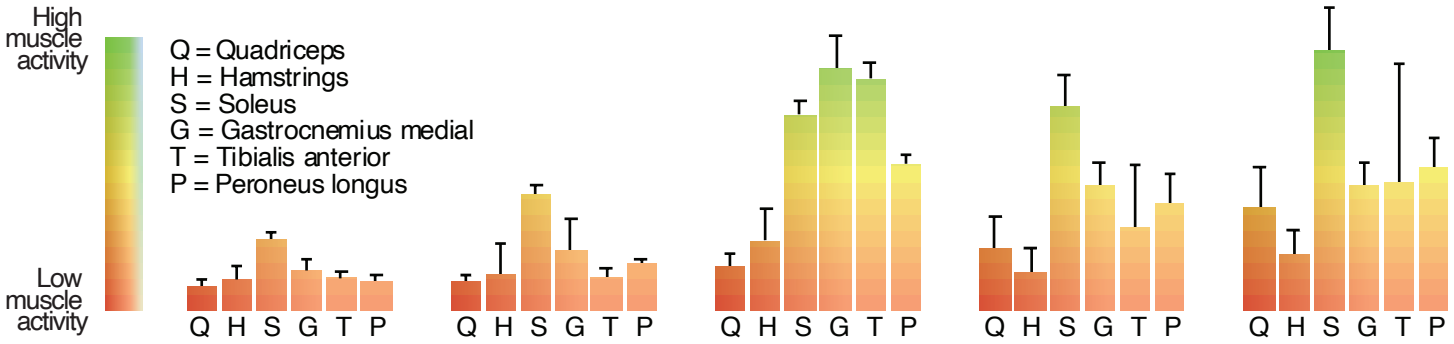
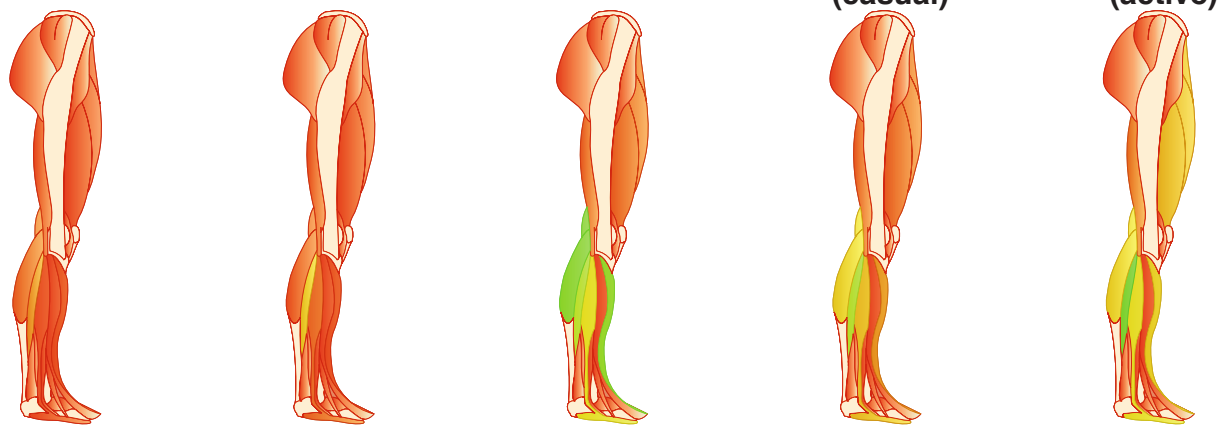
Regularly replacing sitting with standing improves metabolic, cardiovascular and musculoskeletal health. However, prolonged static standing can be harmful. Several dynamic standing options, like standing boards, have been introduced to mitigate the musculoskeletal risks, while amplifying the metabolic benefits of standing. Gymba is an activation board that is designed to enable walking like movements during standing. The aim of this pilot study was to compare muscle activity amplitude and variability of casual and active Gymba use to sitting, standing and walking in three recreationally active adults doing office work. The muscle activity amplitude indicates total activity of muscles, and variability the muscle activity variability during these activity periods.

Casual and active Gymba use increased thigh muscle activity 62% and 162%, and lower extremity muscle activity 115% and 181% as compared to standing, respectively. As compared to walking, thigh muscles were as active and 58% more active, and calf muscles 34% and 15% less active during casual and active Gymba use, respectively.

This small-scale pilot study suggests that Gymba use is more active than standing, and as active, or even more active than walking. Using Gymba likely promotes metabolic health, while mitigating the musculoskeletal risks associated with prolonged sitting and standing.

Muscle activity amplitude





Muscle activity variability