

difference between genders regarding these variables. Further research is needed to determine the role gender plays in running economy and balance, as well as the relationship between variables of running economy and balance.

C-24 Free Communication/Poster – Motor Control

732

Sitting On My Fine Motor Skills

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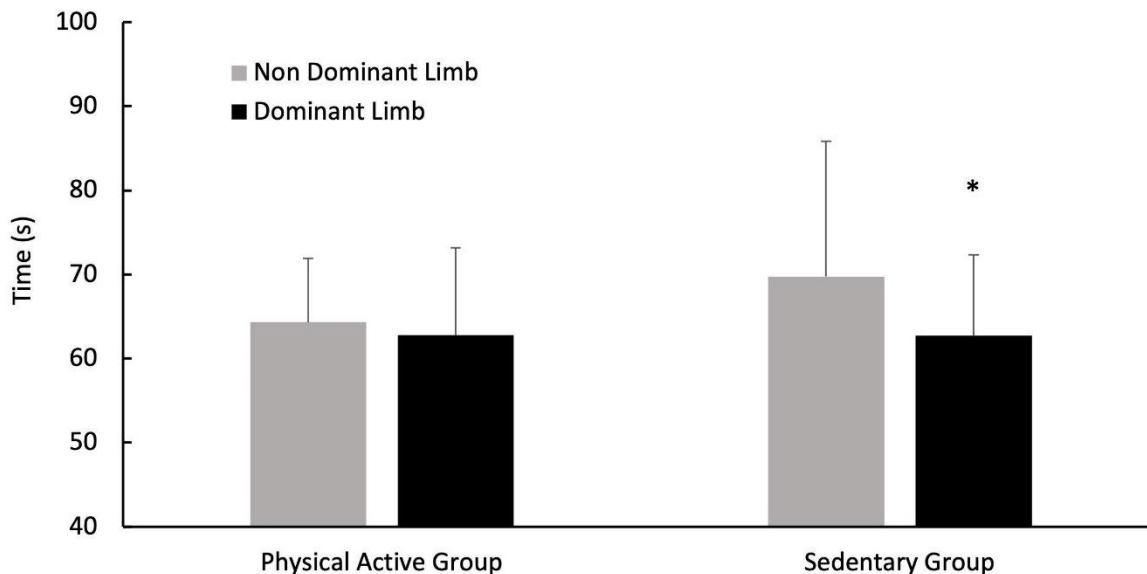
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(No relevant relationships reported)

PURPOSE: Sedentary behaviors are characterized by low energy expenditure of 1.5 Metabolic Equivalent Task or extended periods of sitting time (ST). When combined with physical inactivity, sedentary behaviors significantly affect various health outcomes, including coordination patterns such as fine and gross motor skills. Since fine motor skills are closely associated with individuals' performance in several daily activities and in living an independent life, this study aimed to investigate the influence of ST on the dominant (DOM) and non-dominant (NO_DOM) upper limbs performance in healthy young adults.

METHODS: 38 young adults (age: 24.8 ± 2.5 yrs; body mass 67.2 ± 12.5 kg; height 170 ± 9.3 cm) participated in the study. The short version of the International Physical Activity Questionnaire was administered to determine the daily individual level of ST. Subjects reporting $ST \geq 4$ hours/day were allocated in the Sedentary Group (SG, $n=18$) while those reporting $ST < 4$ hours/day were allocated in the Physically Active Group (PAG, $n=20$). The Grooved Pegboard Test (GPT) was used to measure (s) fine motor skills of the upper DOM and NO_DOM limb. A repeated measures mixed model was performed to compare DOM and NO_DOM upper limb GPT performances between SG and PAG ($p < 0.08$).

RESULTS: Significant differences were found between limbs in SG (DOM: 62.70 ± 9.6 s NO_DOM: 69.75 ± 16.1 s, $p < 0.003$). No others significant differences were found between groups and limbs conditions (Figure 1).

Figure 1. Grooved Pegboard Test performances in Non Dominant and Dominant limb in Physical Active and Sedentary Group



* = significantly different ($p < 0.003$) from non dominant limb

CONCLUSIONS: Significant differences between limbs in SG could be interpreted as an inter-limb asymmetry (DOM vs NO DOM) due to the negative impact of physical inactivity and ST on the coordination patterns. On the contrary, the findings of the PAG could be interpreted as inter-limb balance. Considering sedentary behaviors' negative impact on motor performance, promoting active lifestyles and reducing sedentary time could improve motor skills, inter-limb asymmetries, and overall health.

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733

Modular Control Of Walking And Physical Activity During Pregnancy And Early Postpartum: A Case Study