

## Supplementary materials

Supplementary Figure 1. EMG device with HP laptop and camera.



Supplementary Figure 2. 3mm EMG electrodes.



Supplementary Figure 3. EMG cables and sensors.



Supplementary Figure 4. The stool used for the study.



Supplementary Figure 5. The crutch that was used by the participant during the task



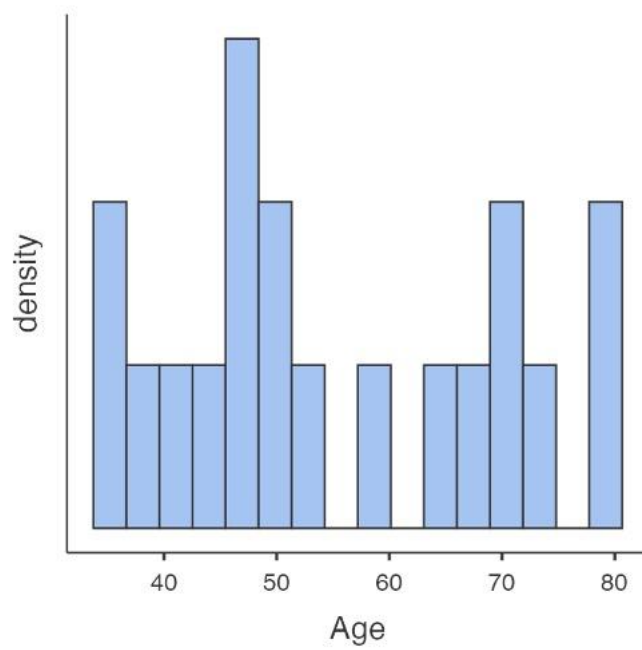
Supplementary Figure 6. Placement of sEMG electrodes for serratus anterior muscle.



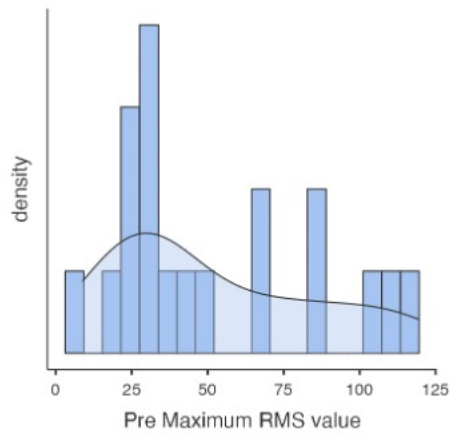
Supplementary Figure 7. Image showing participant doing forward reach task.



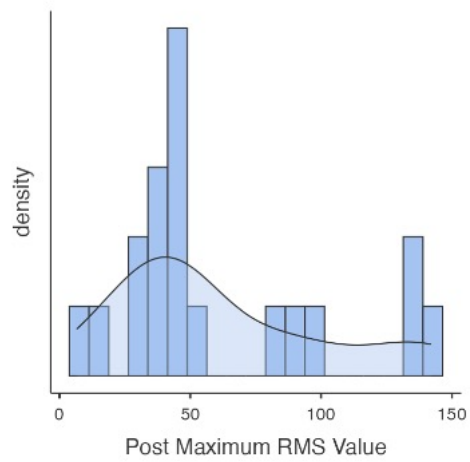
Supplementary Figure 8. Graphical representation of age.



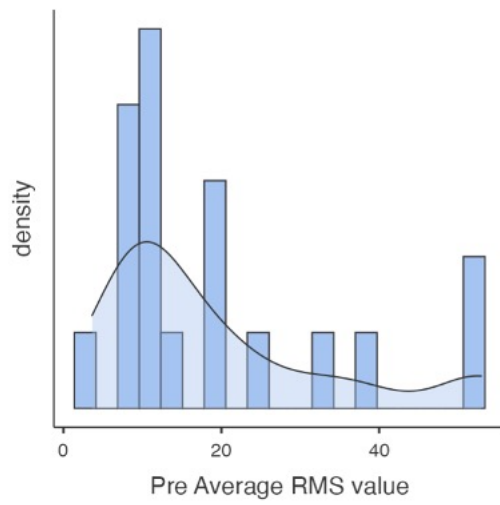
Supplementary Figure 9. Graphical representation Pre RMS maximum value.



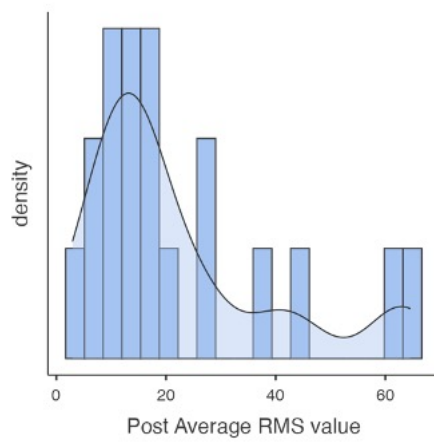
Supplementary Figure 10. Graphical representation Post RMS maximum value.



Supplementary Figure 11. Graphical representation Pre RMS average value.



Supplementary Figure 12. Graphical representation Post RMS average value.



Supplementary Table 1. Parameters of the currents used.

Frequency	50Hz
Pulse Duration	200 microseconds
Intensity	As tolerated by the participant
Time	20 minutes

Supplementary Table 2. Shapiro-Wilk test for Normality.

Variables	Shapiro-Wilk (W-value)	Shapiro Wilk (p-value)
Age	0.925	0.142
Root mean square maximum value pre intervention	0.891	0.034
Root mean square maximum value post intervention	0.868	0.013
Root mean square average value pre intervention	0.813	0.002
Root mean square average value post intervention	0.822	0.002
Area under the curve pre intervention	0.797	0.001
Area under the curve post intervention	0.883	0.024

Supplementary Table 3. Descriptive statistics for root mean square maximum value. RMS, Root mean square.

Variables	N	Median(mV)(IQR)
RMS Maximum value pre intervention	19	34.5 mV (76.3-27.5)
RMS Maximum value post intervention	19	47.7 mV(86.4-34.8)

Supplementary Table 4. Descriptive statistics for root mean square average value. RMS, Root Mean Square.

Variables	N	Median(mV)(IQR)
RMS average value pre intervention	19	12 mV (22.9-9.04)
RMS average value post intervention	19	16.39 mV(26.5-11.5)

Supplementary Table 5. Wilcoxon signed rank test for RMS maximum and average values. RMS, Root Mean Square.

Wilcoxon w	Statistical Value	p value
RMS Maximum value pre intervention	88.0	0.546
RMS Maximum value post intervention	94.0	0.701