

Supplementary Material

Figure S1 The measurement setup with stiffness device (SD) and the two ultrasonic distance sensors



Figure S2 Placement of the electrode's at erector spinea and multifidus muscle

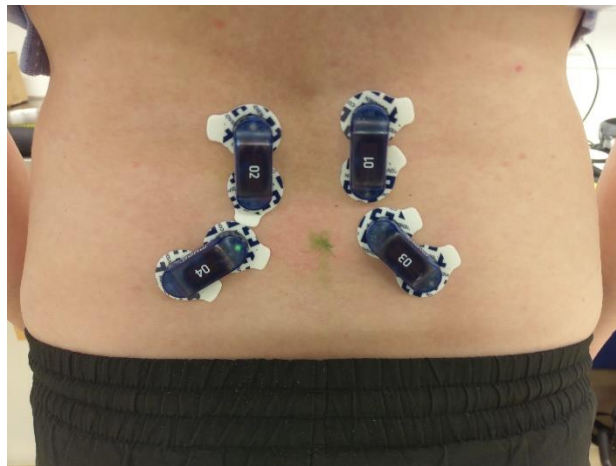


Figure S3 Placement of the electrodes at transversus abd. and iliopsoas muscle



Figure S4 An exemplar of EMG raw data

Representative Subject Nr. 7, Right Lumbar ES, Parabel 4

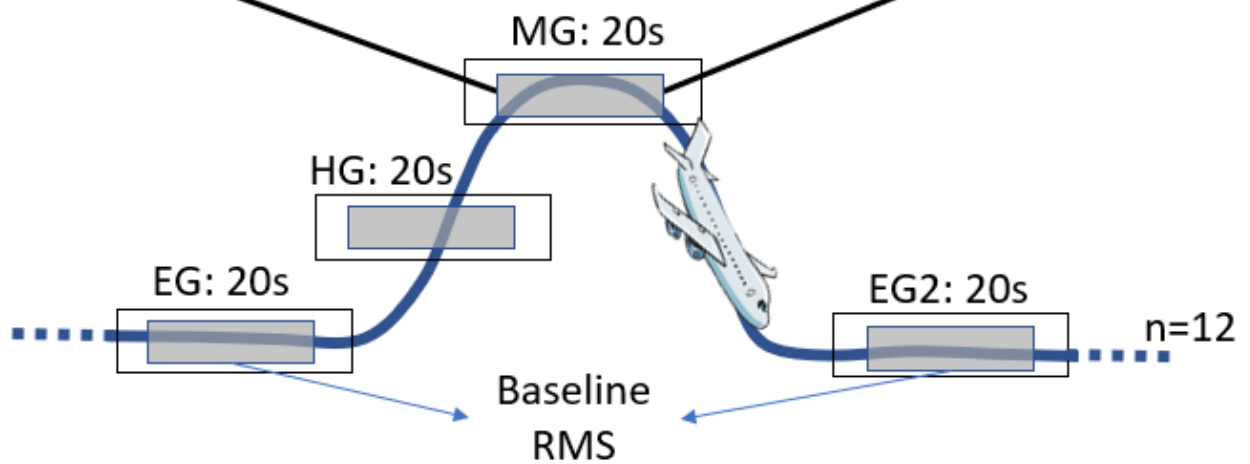
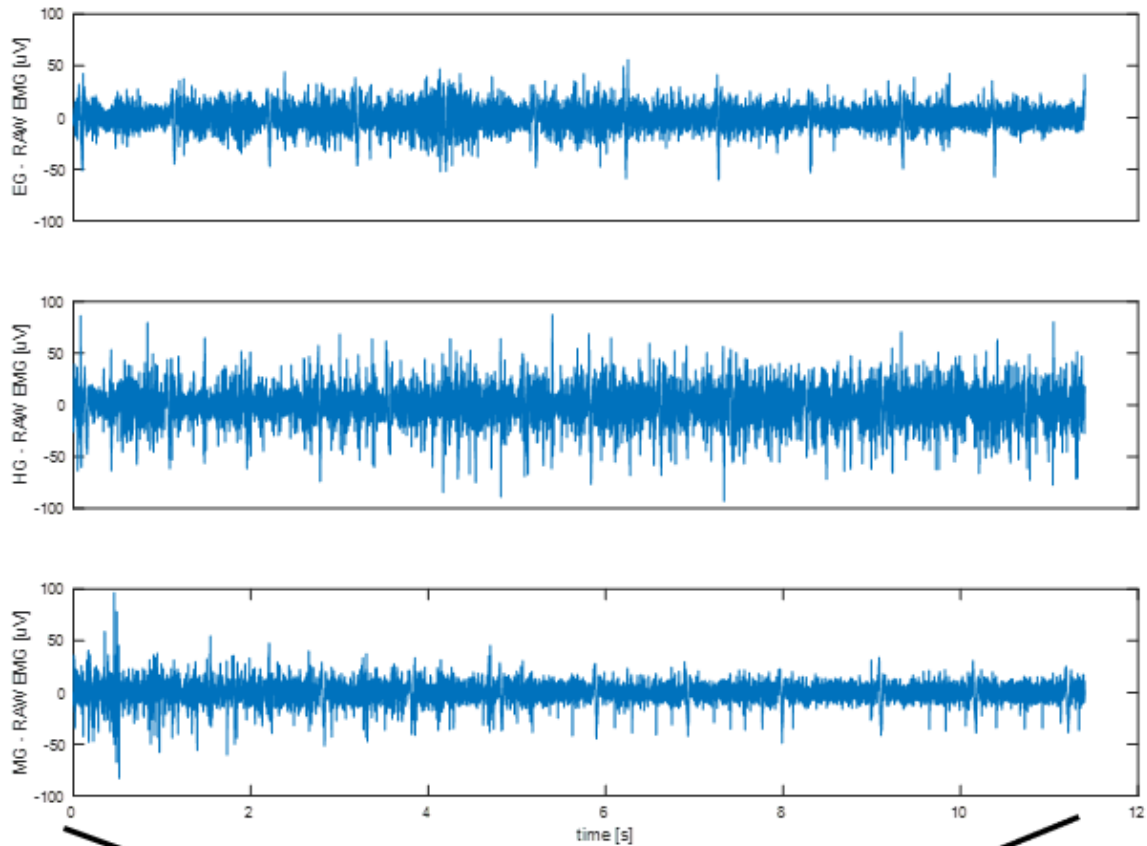
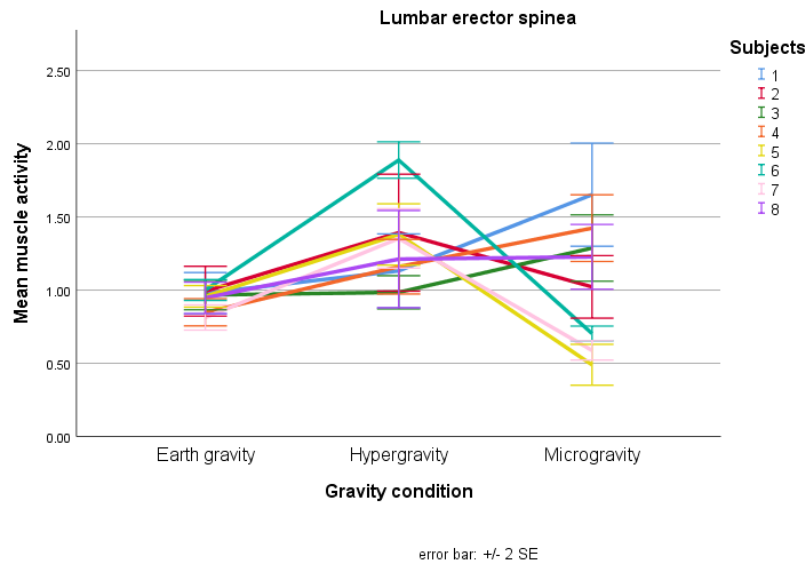
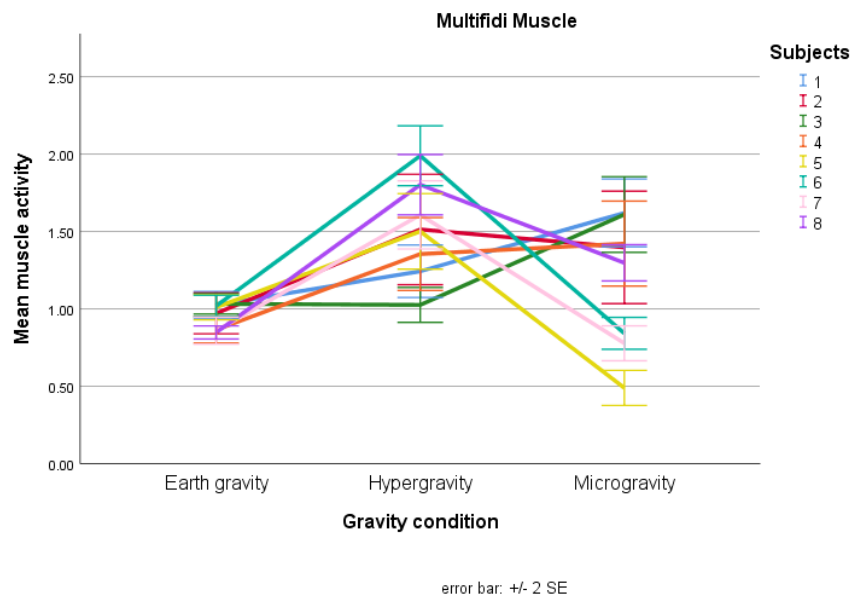


Figure S5a Change of erector spinea muscle activity due to change in conditions**Figure S5b** Change of multifidi muscle activity due to change in conditions**Figure S5c** Change of transversus abdominis muscle activity due to change in conditions

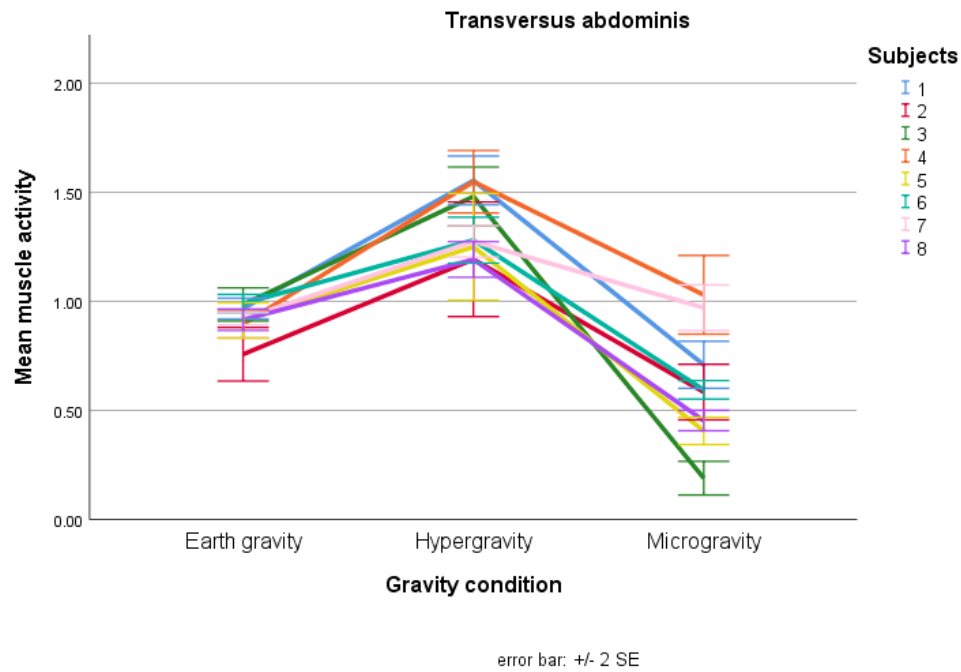


Figure S5d Change of psoas muscle activity due to change in conditions

