Supplementary Material

# Supplementary Figures



**Supplementary Figure 1.** An example representation of the functional performance across interventions plotted as number of steps per minute and mean stance periods per minute throughout the 6 hours of recording for the left (black) and right (red) hind limbs for rat #1.



**Supplementary Figure 2.** An example representation of the functional performance across interventions plotted as number of steps per minute and mean stance periods per minute throughout the 6 hours of recording for the left (black) and right (red) hind limbs for rat #2.



**Supplementary Figure 3.** An example representation of the functional performance across interventions plotted as number of steps per minute and mean stance periods per minute throughout the 6 hours of recording for the left (black) and right (red) hind limbs for rat #4.

# Supplementary Videos

**Supplementary Video 1.** Representative animal with sqES demonstrating air-stepping.

**Supplementary Video 2.** Representative animal with sqES demonstrating alternating hind-limb step-like activity during forelimb driven locomotion and bipedal standing while weight bearing.