

## S2 – Sagittal plane joint kinematics and kinetics

**S2 Fig 1. Sagittal plane joint angles and moments.** A: Slow speed gait; B: Normal (preferred) speed gait; and C: Fast speed gait. Controls are shown with black lines with gray boundaries representing  $\pm 1$  standard deviation (s.d.). Blue lines are for an amputee with a C-Leg micro-controlled prosthesis and green lines are for an amputee with a passive-mechanical Mauch hydraulic knee. For amputees, dash line is prosthesis side and solid line is their intact side. Vertical lines show toe-off time for controls (gray region representing  $\pm 1$  s.d.) as well as toe-off of the prosthesis side (dashed vertical line) and intact side (solid vertical line) for both amputees. Top rows of each panel are ankle, knee and hip joint angle, and bottom rows are net joint torques for ankle, knee and hip.

**S2 Fig 2. Sagittal plane joint and segment powers for fast speed gait.** A: Slow speed gait; B: Normal (preferred) speed gait; and C: Fast speed gait. Controls are shown with black lines with gray boundaries representing  $\pm 1$  standard deviation (s.d.). Blue lines are for an amputee with a C-Leg micro-controlled prosthesis and green lines are for an amputee with a passive-mechanical Mauch hydraulic knee. For amputees, dash line is prosthesis side and solid line is their intact side. Vertical lines show toe-off time for controls (gray region representing  $\pm 1$  s.d.) as well as toe-off of the prosthesis side (dashed vertical line) and intact side (solid vertical line) for both amputees. Top rows of each panel are distal segment powers at each joint, middle rows are proximal segment powers at each joint, and the bottom row shows the resulting “net joint power”, at each joint.

Figure S2.1(A)

Slow Speed Walking

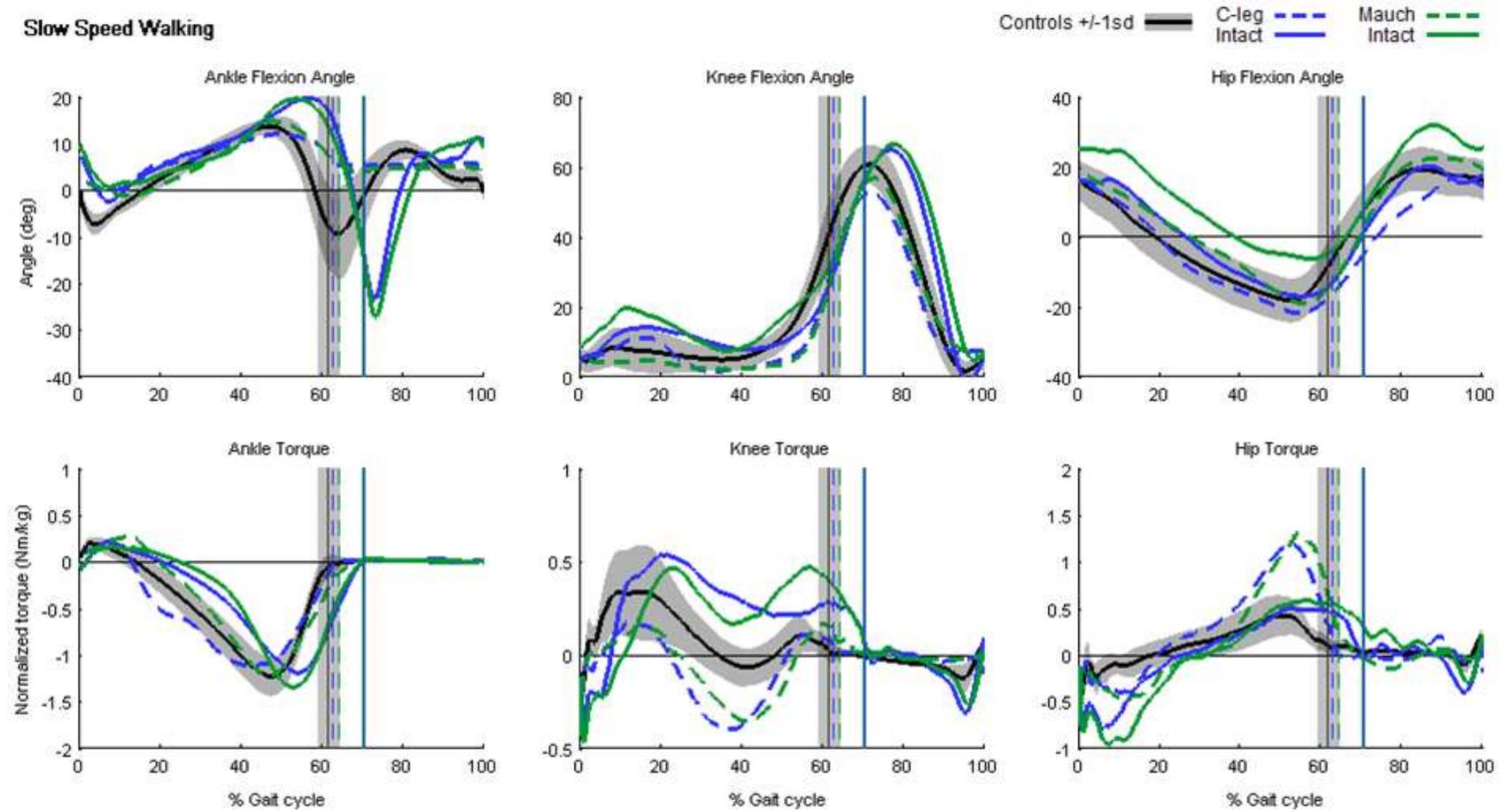


Figure S2.1(B)

Normal Speed Walking

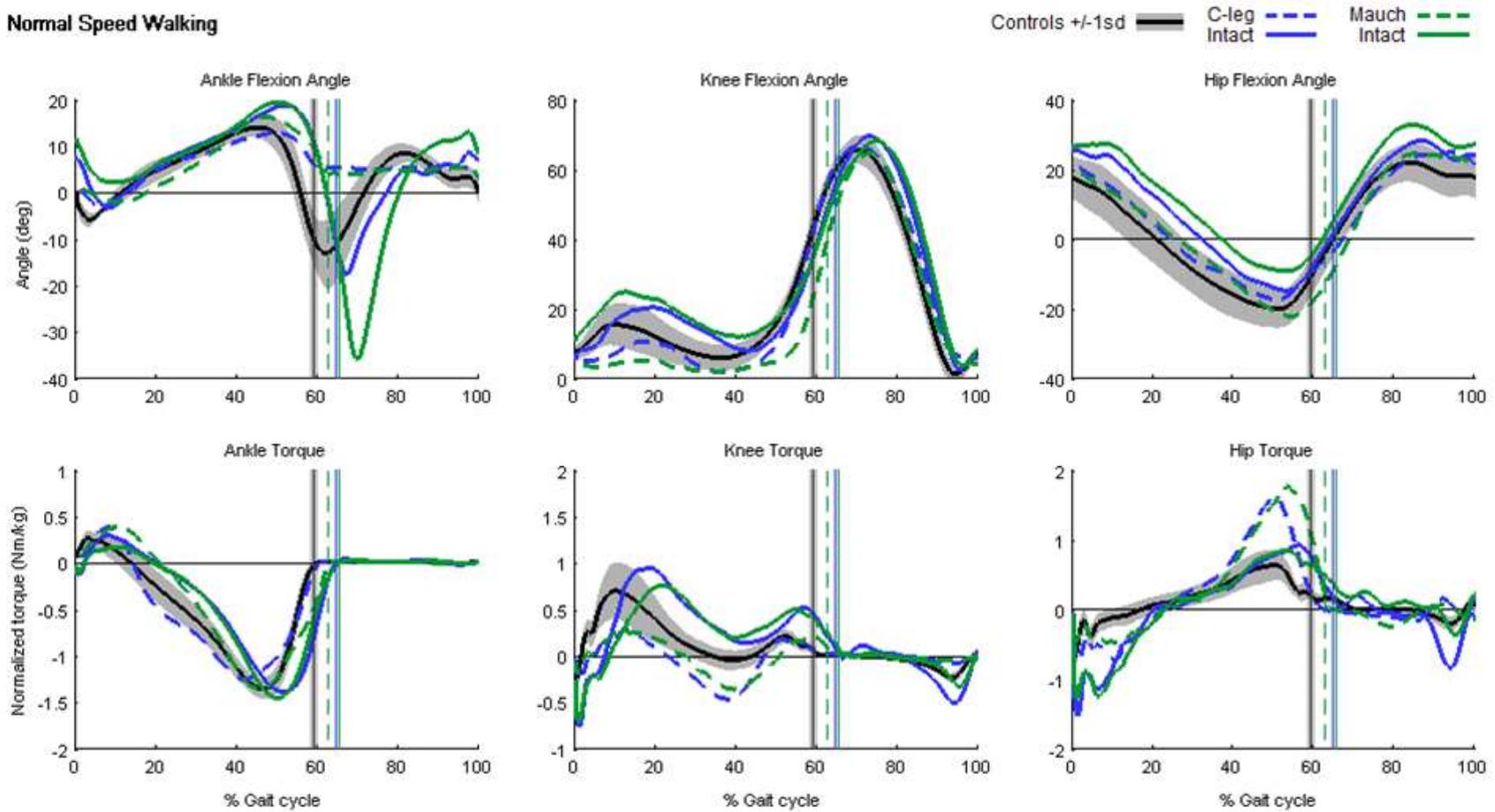


Figure S2.1(C)

Fast Speed Walking

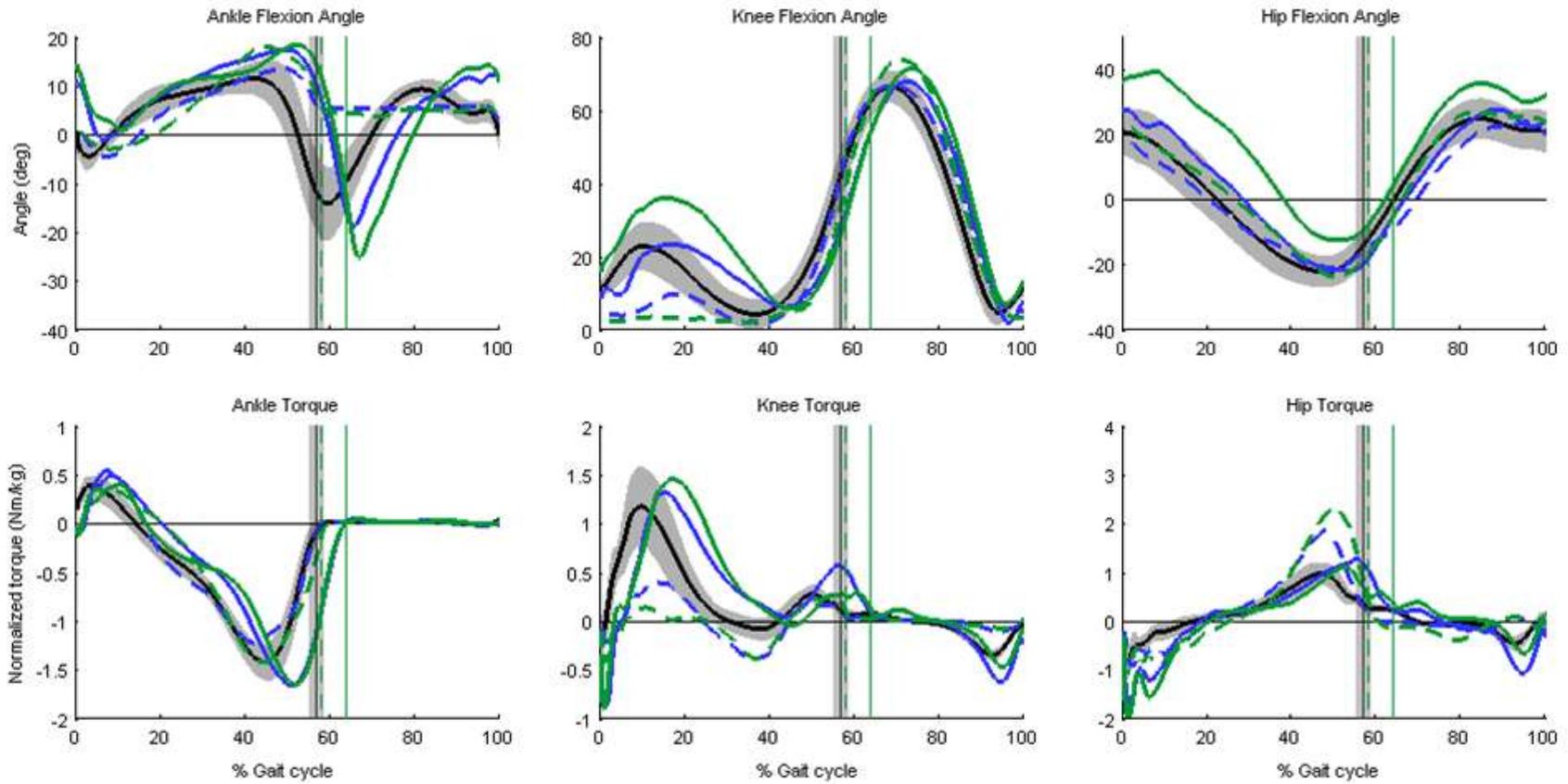


Figure S2.2(A)

Slow Speed Walking

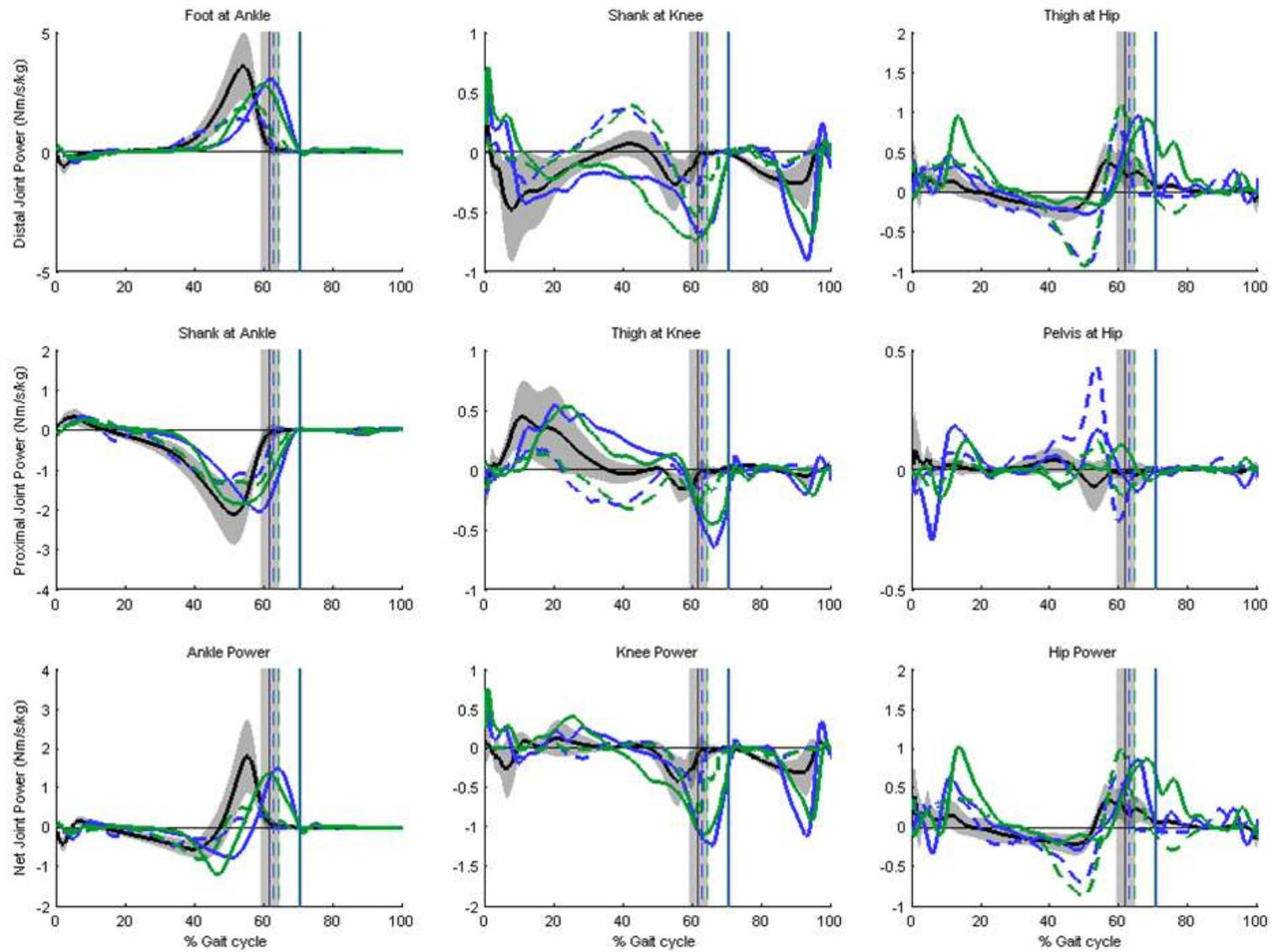


Figure S2.2(B)

Normal Speed Walking

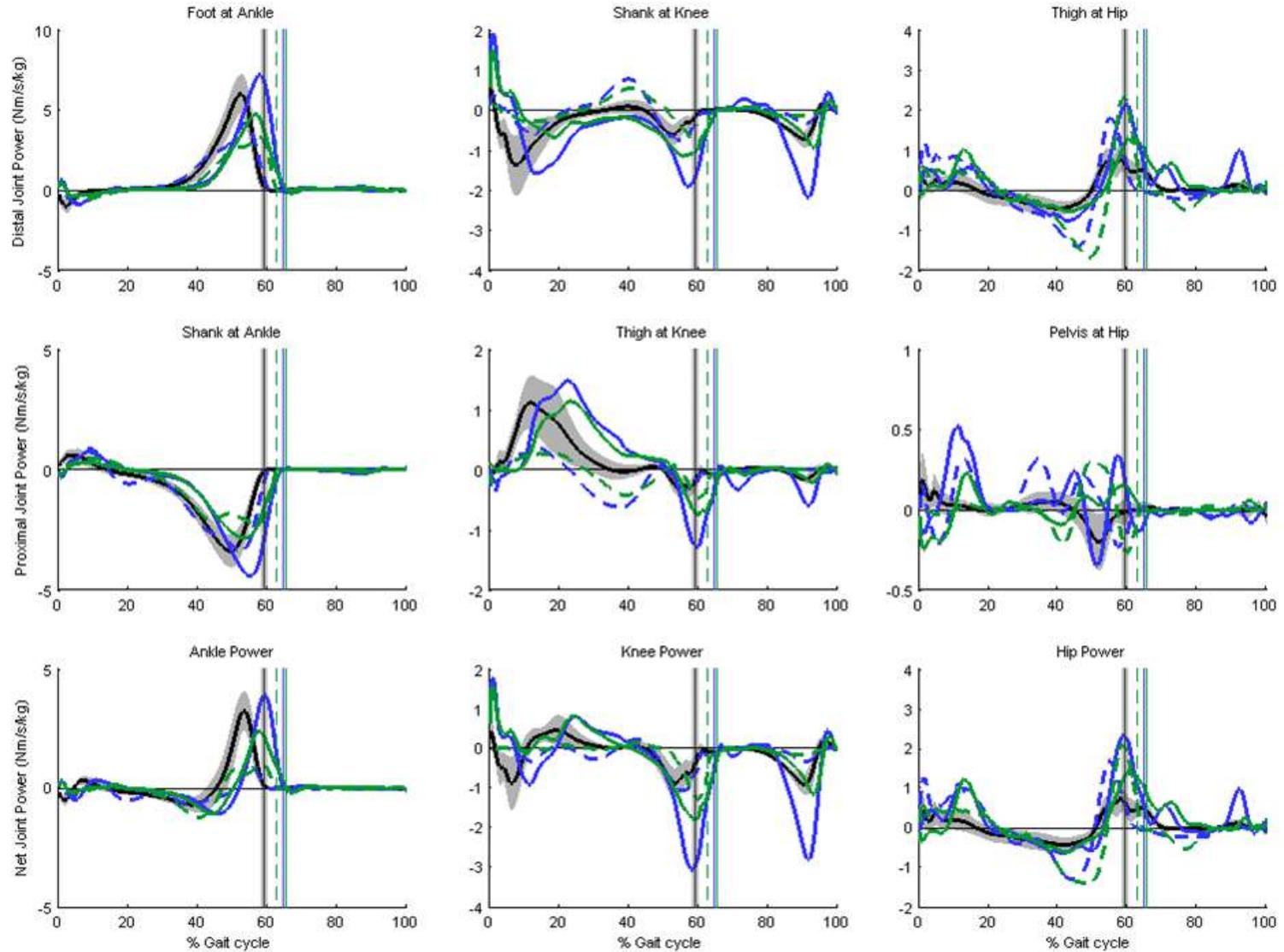


Figure S2.2(C)

Fast Speed Walking

