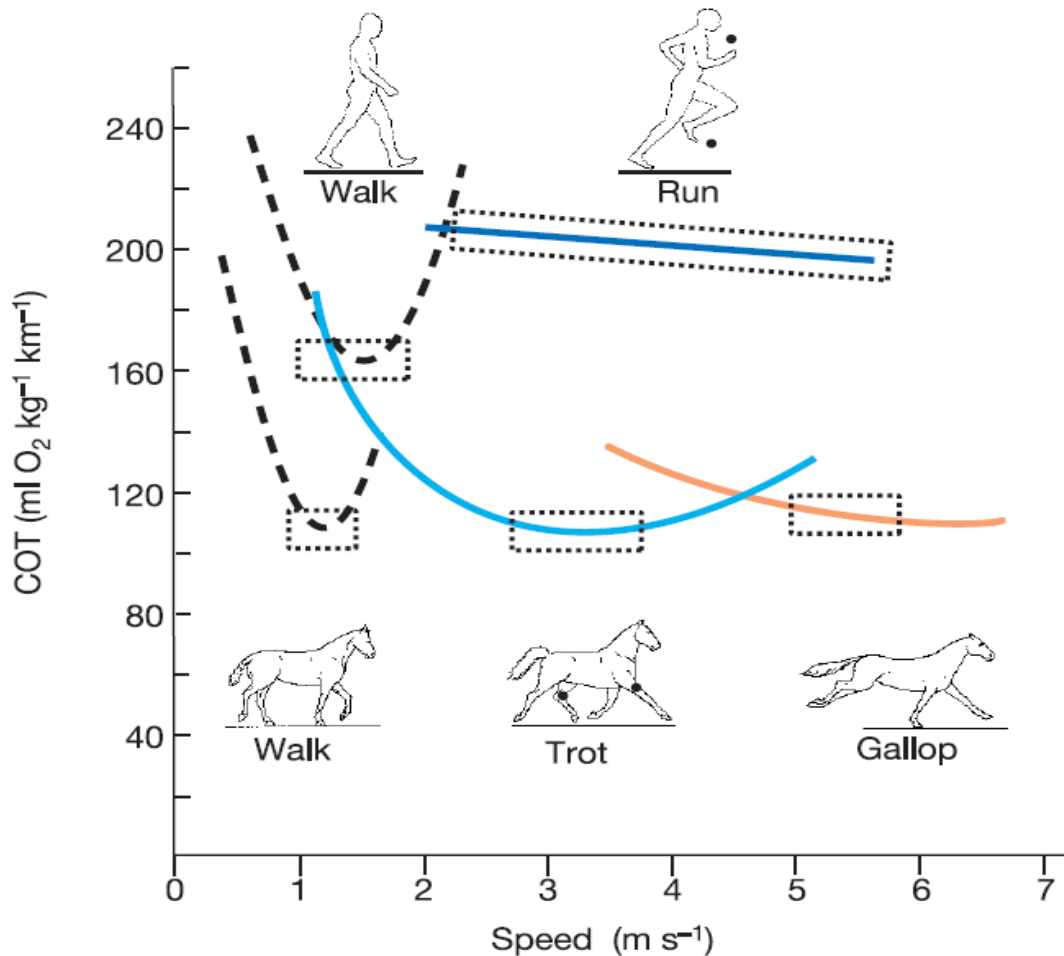


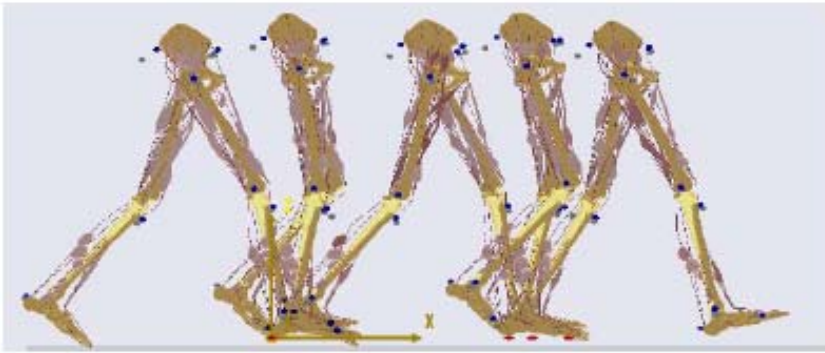


# ■ HYPOTHESIS



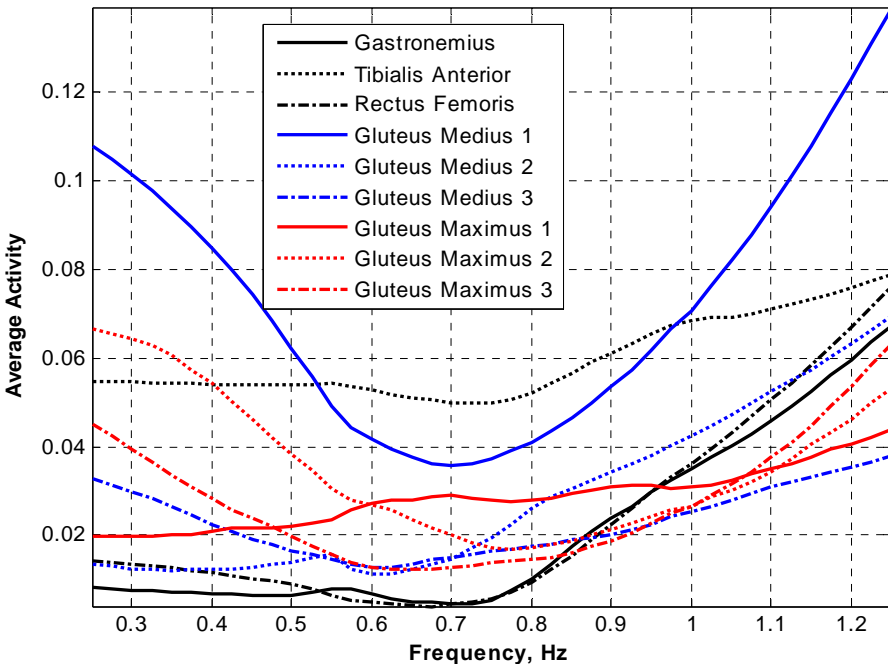
- Expended effort is minimal when the locomotory appendages/propulsive structures are moving at steady-state in periodic gaits at their resonant frequencies.

# Musculoskeletal Simulation-based Parametric Study of Optimal Gait Frequency in Biped Locomotion. pp 354-359



- Determine optimal gait frequency by musculoskeletal simulation.
- Simple and compound pendulum case studies; followed by human biped locomotion.
- Results match reported mathematical models in the literature.

Selected Average Muscle Activity (Right Leg) in 1 Gait Cycle vs. Freq



4:30 - 5:45 PM



Nevada Room

