

Normal Gait Reference

Acknowledgement to:

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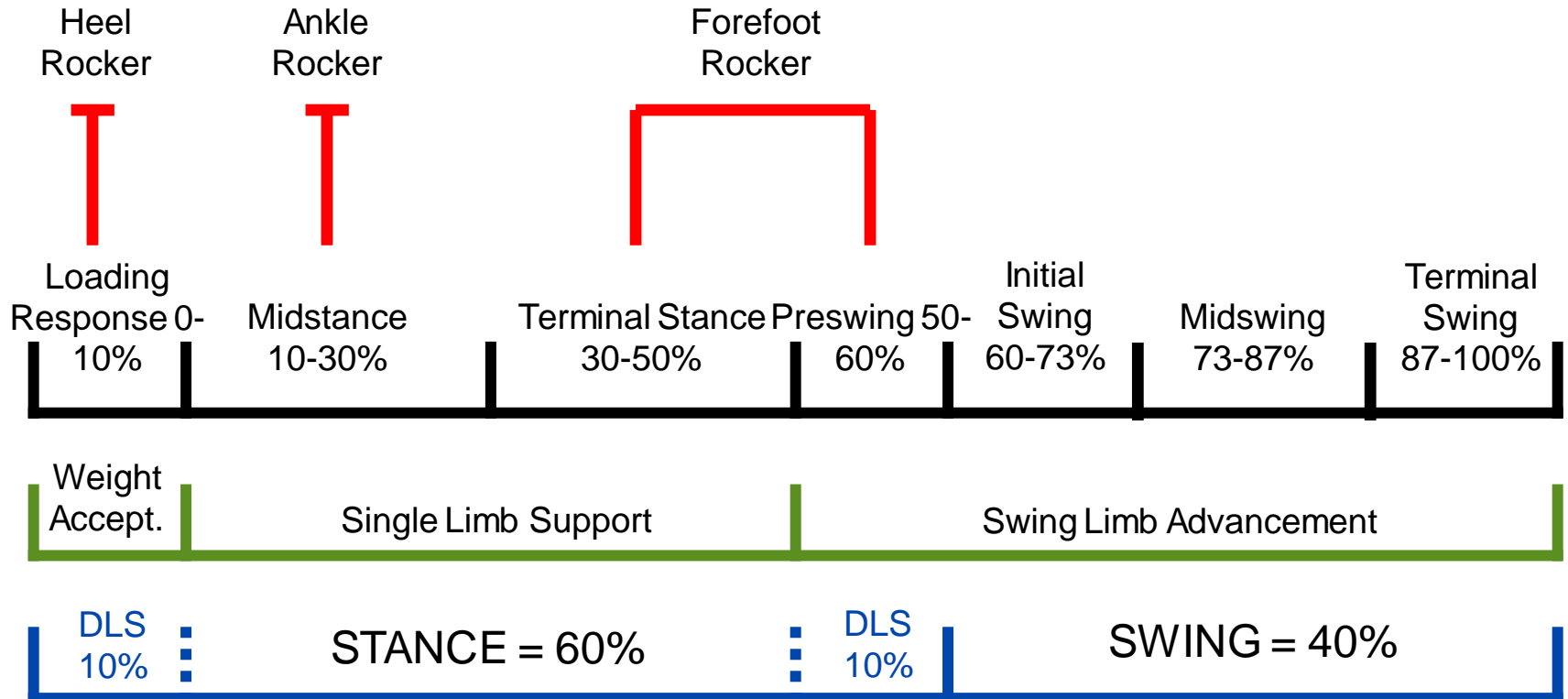


Normal Gait

Reference for:

- Phases of gait cycle
- Basic temporal and spatial measures
- Joint kinematics
- Muscle activation patterns

One Gait Cycle



Temporal and Spatial Measures

- Stride: One “cycle” of gait
 - Stride duration norms- M: 1.1 sec; F: 1.03 sec
- Step: Contact on one limb to contact on the opposite limb
- Stance Time: 60% of cycle
- Swing Time: 40% of cycle
- Single Limb Support Time: 80% of cycle
- Double Limb Support Time: 20% of cycle

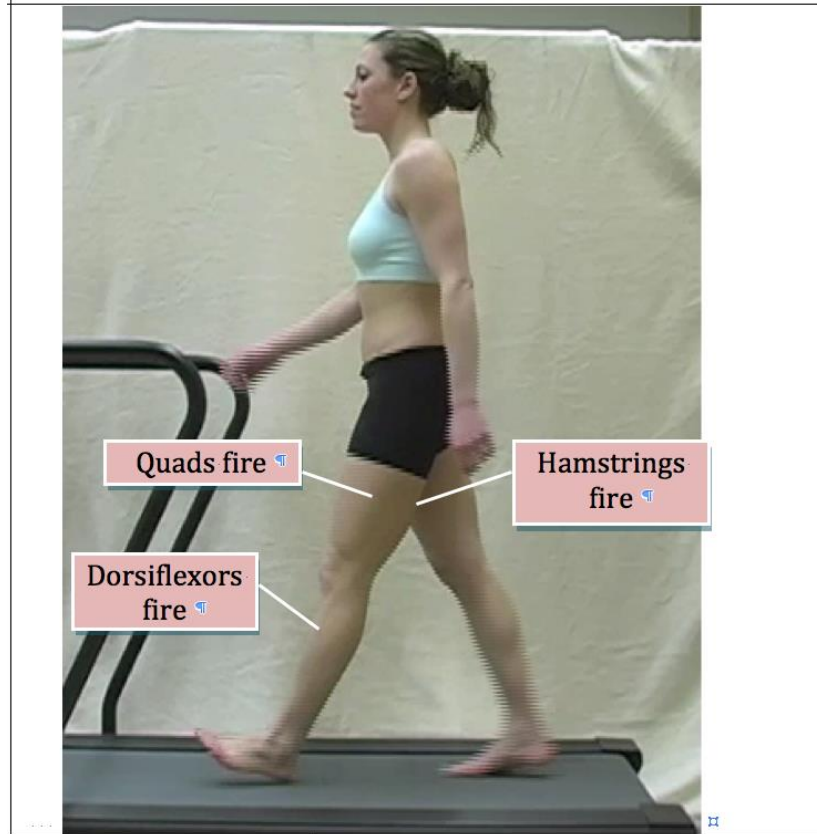
Temporal and Spatial Measures

- Stride Length: Norms- M: 1.5m; F: 1.3m
- Step Length: Norms- half of stride length
- Base of Support Width: 2-12cm between heels
- Toe Out: ~7 degrees
- Cadence: Step Rate, M: 110/min; F: 116/min
- Velocity: 80 m/min (M: 80-91; F: 73-81)

RLA Phases of Gait

Initial Contact

Initial Contact

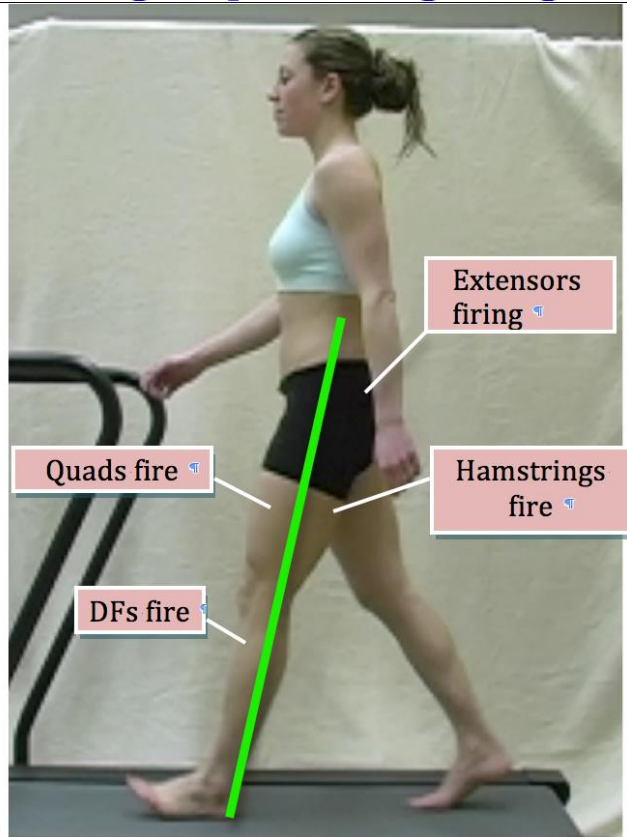


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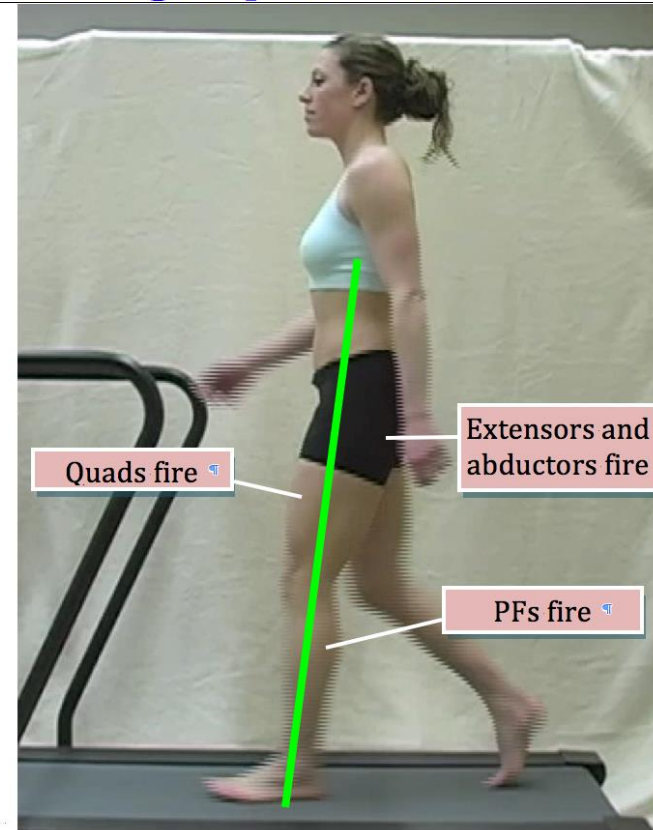


Loading Response

Loading Response - Beginning



Loading Response - End

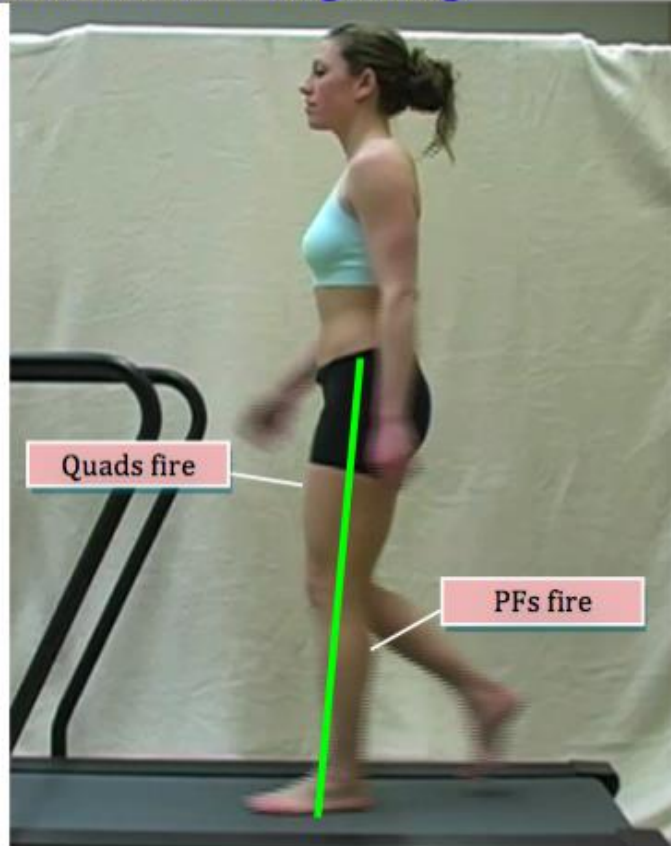


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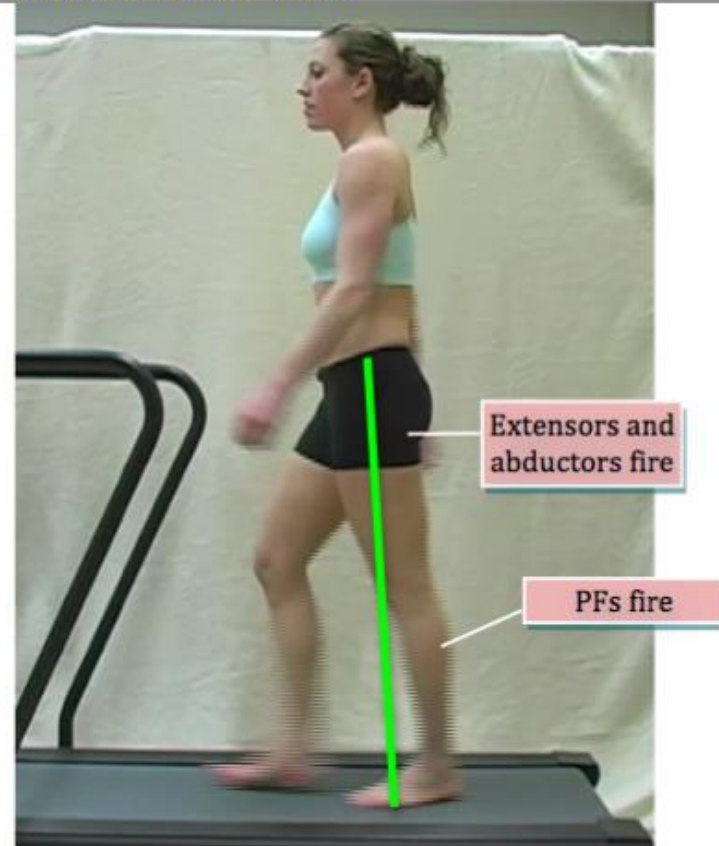


Midstance

MIDSTANCE - Beginning



MIDSTANCE - End

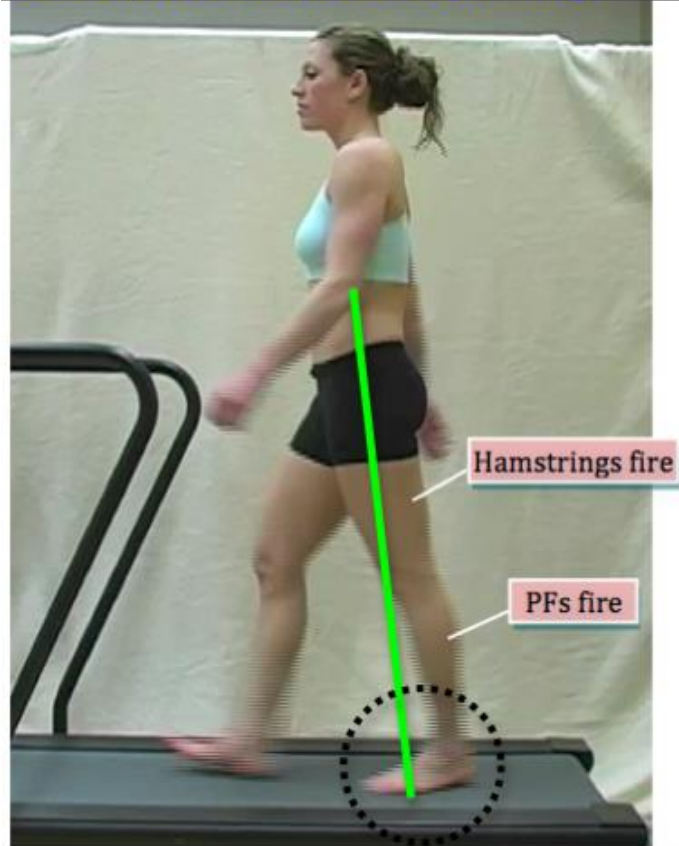


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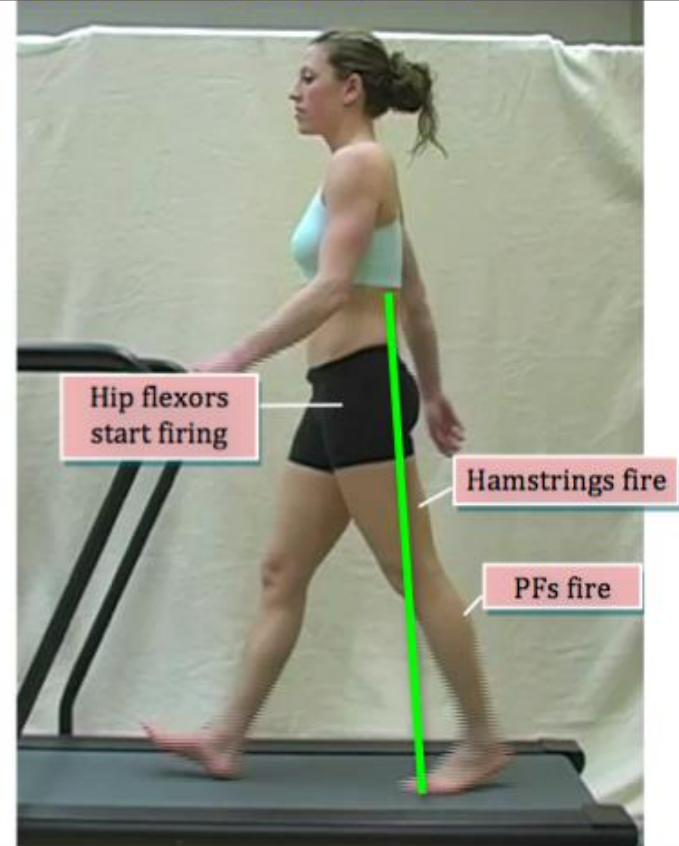


Terminal Stance

TERMINAL STANCE - Beginning



TERMINAL STANCE - End

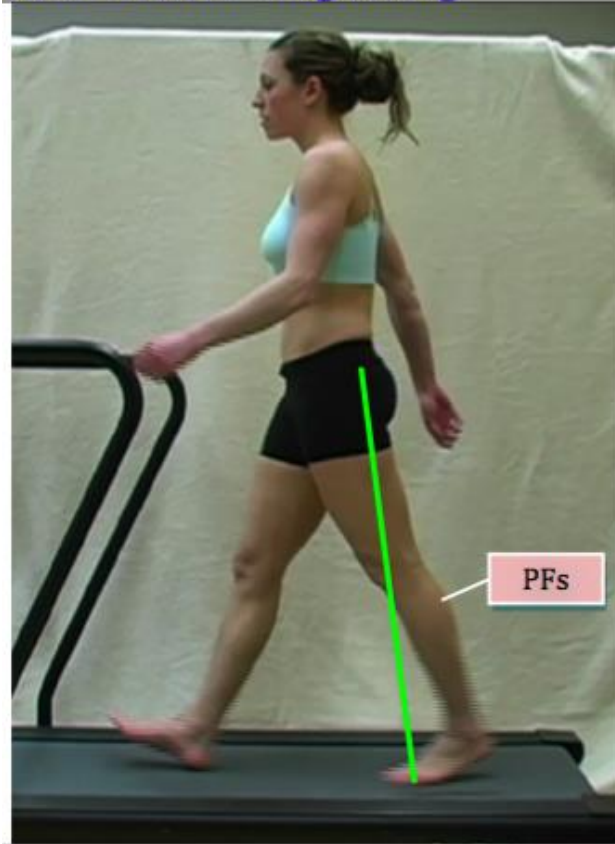


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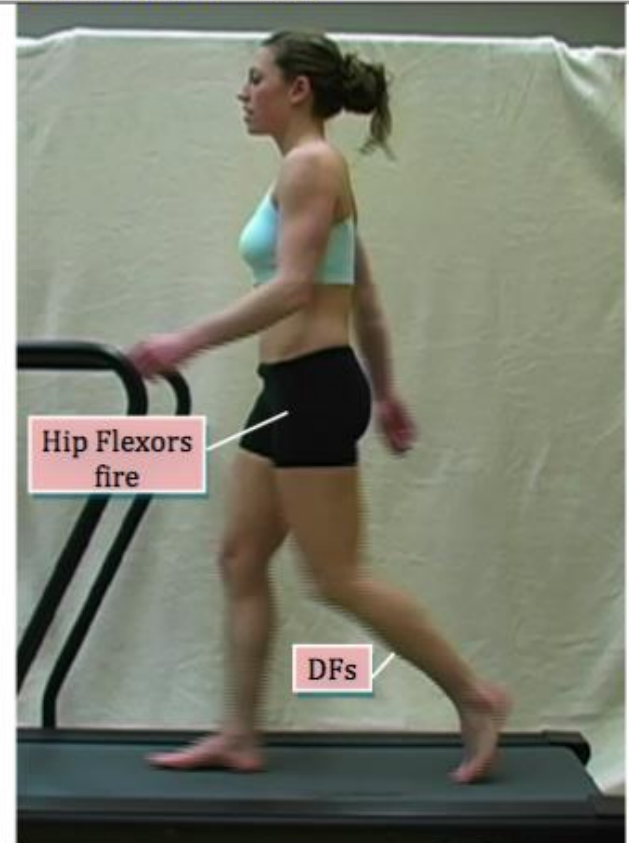


Preswing

PRE-SWING - Beginning



PRESWING - End



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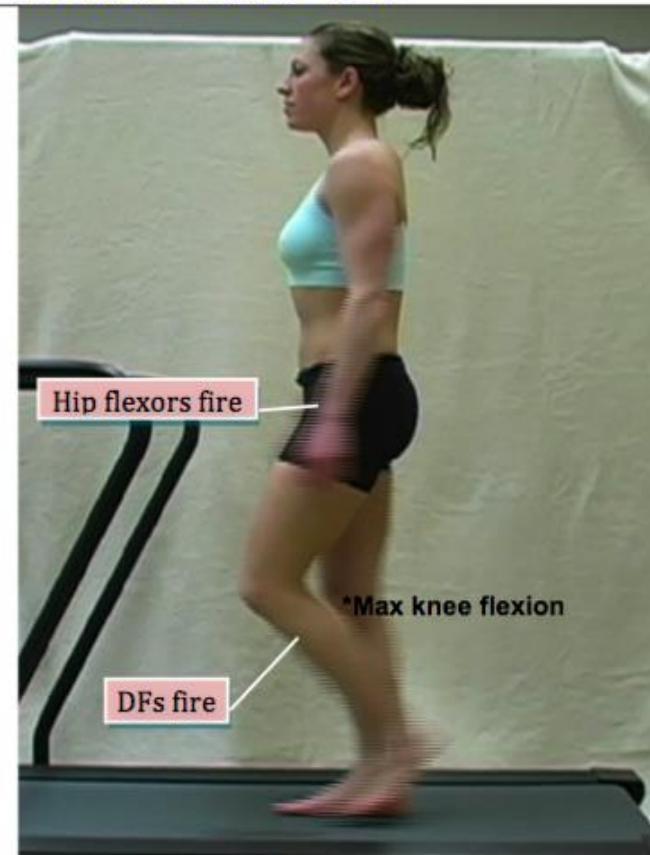


Initial Swing

INITIAL SWING - Beginning



INITIAL SWING - End

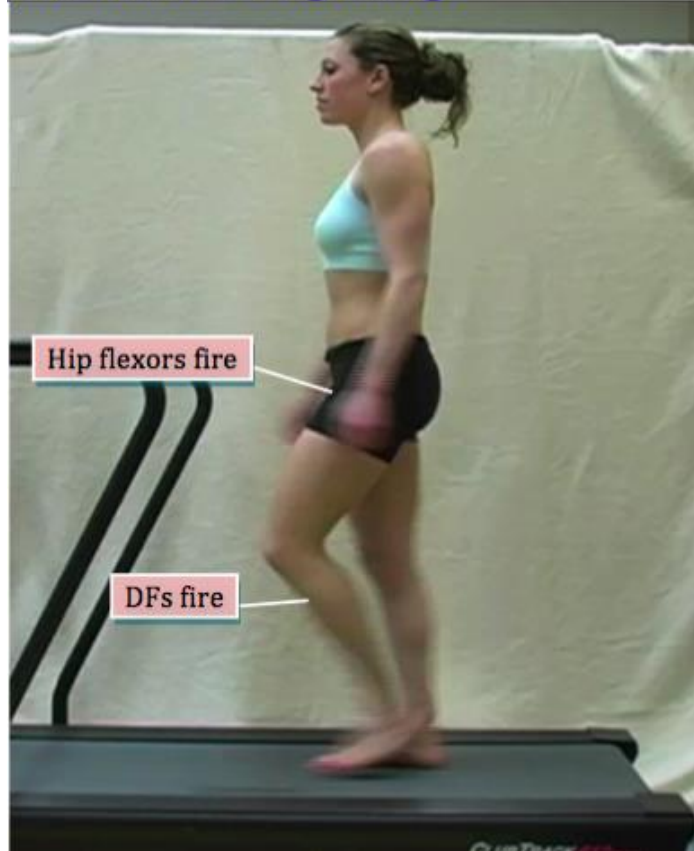


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Midswing

MID-SWING - Beginning



MID-SWING - End

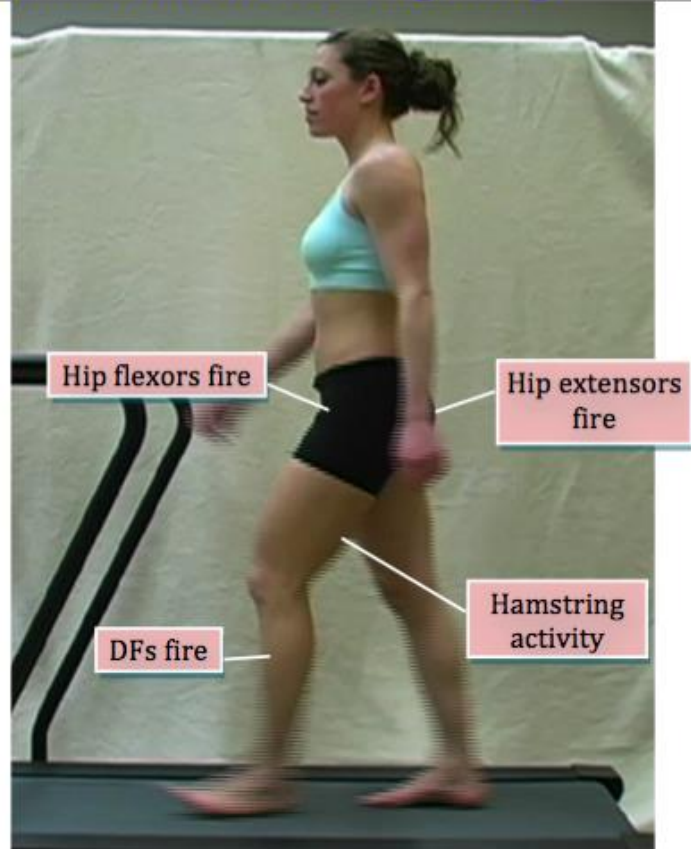


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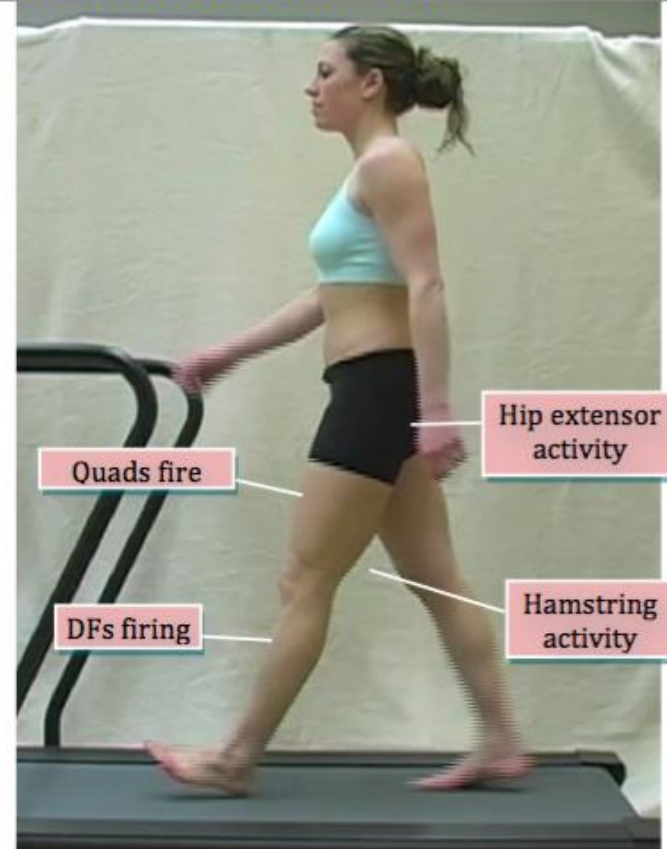


Terminal Swing

TERMINAL SWING - Beginning



TERMINAL SWING - End

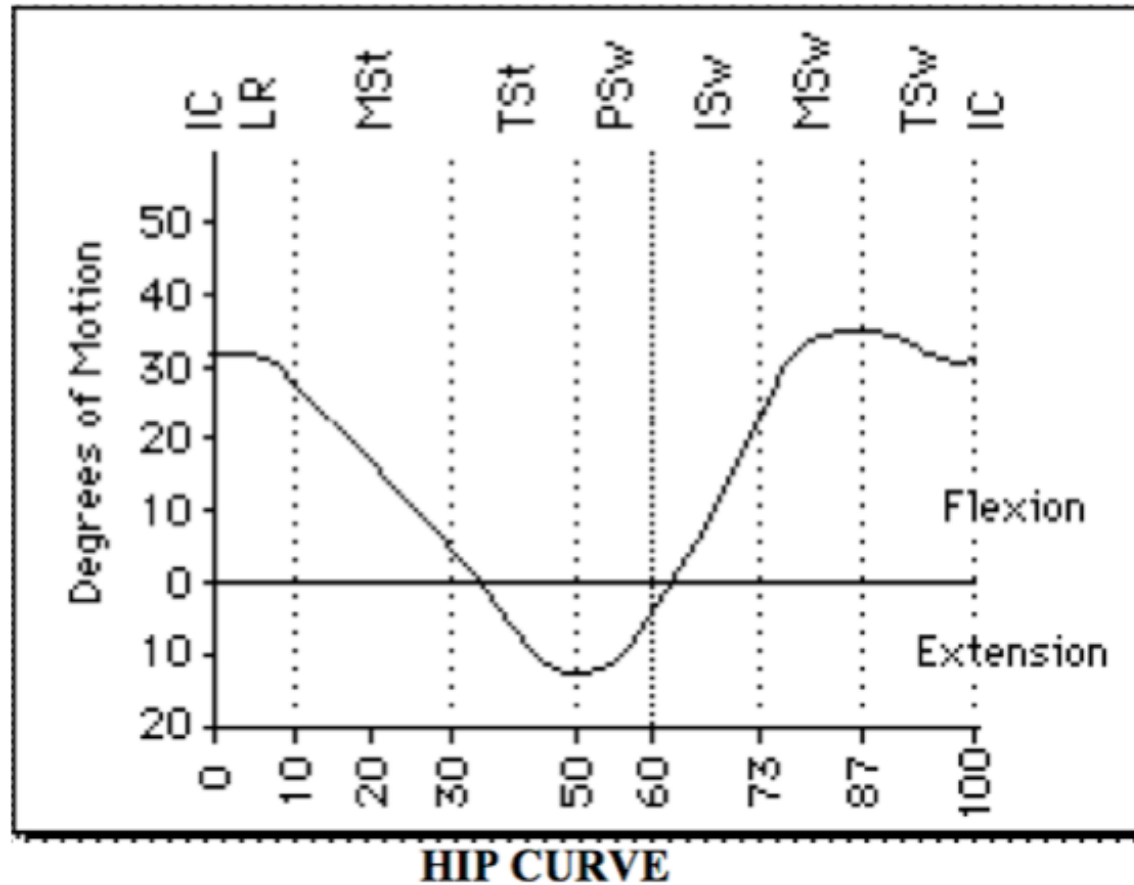


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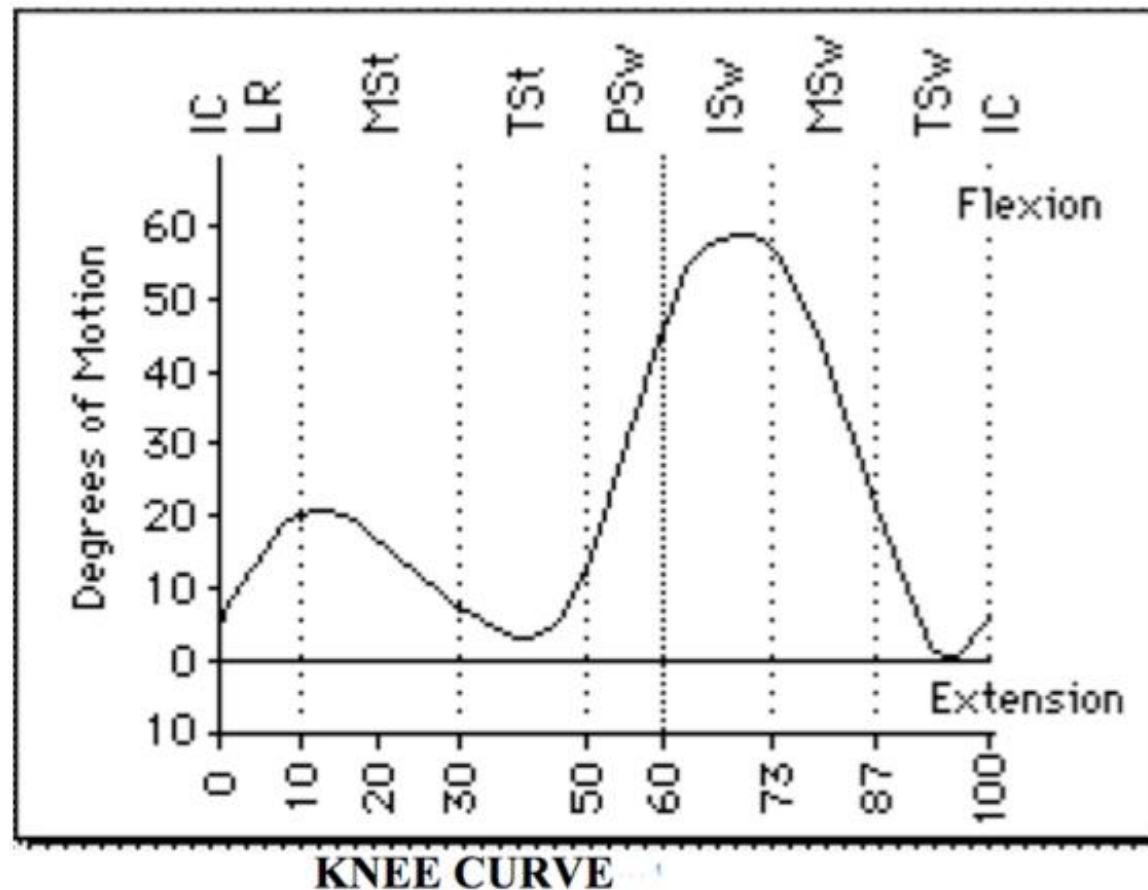


Joint Kinematics

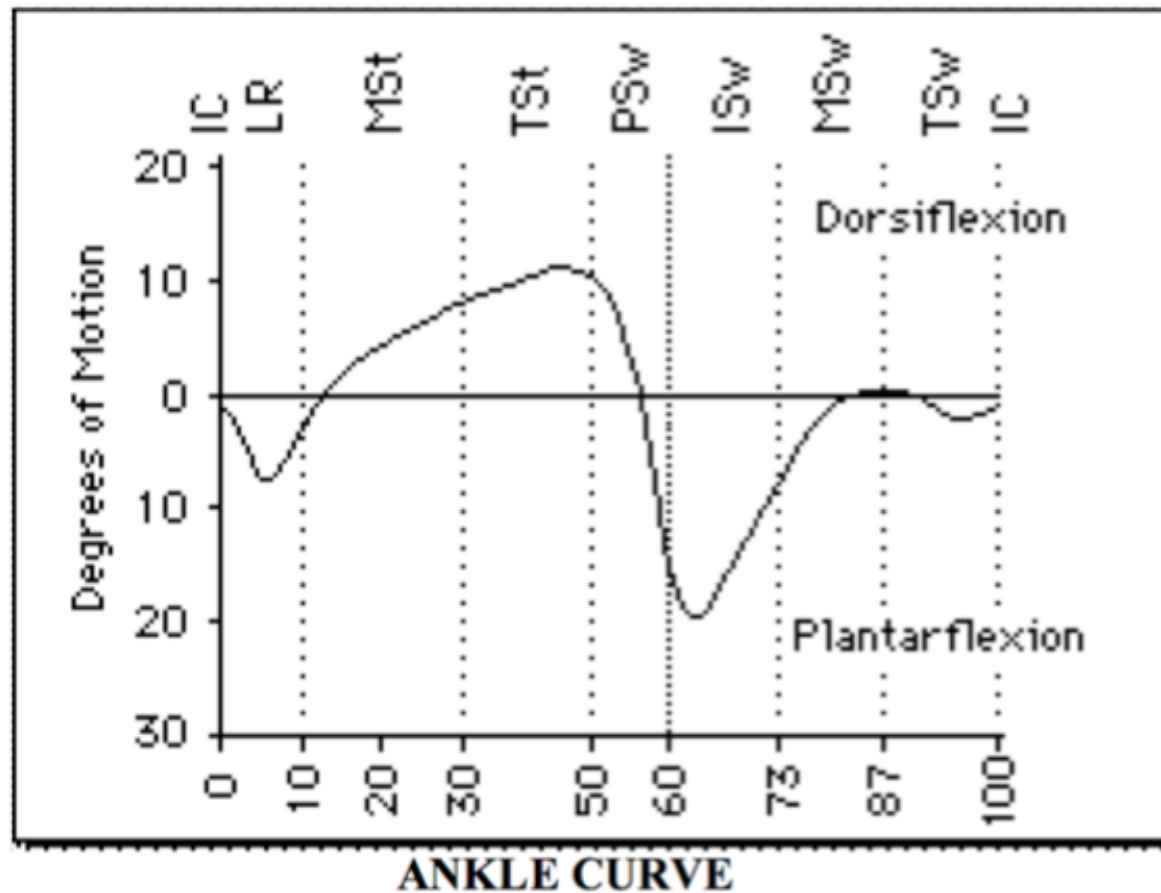
Normal Kinematics Hip



Normal Kinematics Knee



Normal Kinematics Ankle



Muscle Activity

Gross Muscle Activity

