

Exercise Therapy

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Foot Drop Gait

Definition

Steppage Gait or Drop foot gait

Steppage gait is an abnormal gait characterized by excessive hip and knee flexion during the swing phase to prevent the toes of the affected foot from dragging on the ground. It occurs due to weakness or paralysis of the ankle dorsiflexor muscles, resulting in foot drop.

Cause

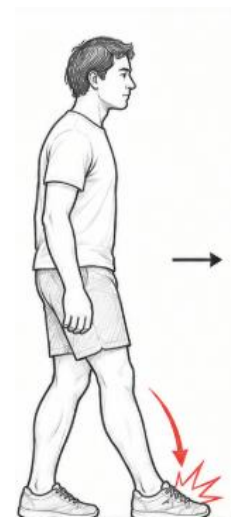
- Weakness or paralysis of the ankle dorsiflexors, particularly the tibialis anterior.
- Commonly associated with common fibular (peroneal) nerve injury, peripheral neuropathy, or L4–L5 nerve root involvement.

Gait deviations during the gait cycle

1. Initial contact: The heel may fail to contact the ground normally because of foot drop.
2. Loading response: The foot may slap onto the ground due to impaired eccentric control of the ankle dorsiflexors.
3. Mid stance: The foot may remain in a relatively plantar-flexed position, affecting normal foot placement and stability.
4. Terminal stance: Push-off may be less efficient because of abnormal foot positioning and impaired control of the ankle.
5. Pre-swing: The toes may not clear the ground adequately as the limb prepares to enter the swing phase.
6. Initial swing: Excessive hip and knee flexion occurs to lift the foot and prevent toe dragging.
7. Mid swing: Increased hip and knee flexion is maintained to ensure adequate toe clearance.
8. Terminal swing: The ankle may remain plantar flexed instead of reaching a neutral position for normal heel contact.

Compensatory movements

- Excessive hip and knee flexion (steppage pattern).
- Hip hiking on the affected side.
- Circumduction of the affected lower limb in some patients.
- Functional problems
- Difficulty clearing the toes during walking.
- Increased risk of tripping and falling.



- Foot slapping during walking.
- Reduced walking efficiency and altered gait pattern.

Joint Movements During Gait: Sagittal, Frontal and Transverse Plane Motions

Gait Cycle Phases

Determinants of Gait

Gait Analysis: Definition, Spatial and Temporal Variables

Gait Cycle: Definition, Phases and Gait Analysis with Diagrams

Human Gait

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