

Documenting Gait Problems and Progress

Gait Analysis

Equipment needs: stop watch with second hand, tape measure

Examples of Defining Problems:

1. Base of Support < 2 inches
2. Decreased Cadence (65 steps/minute)
3. Decreased (R) foot/ (L) foot dorsiflexion (=10 degrees) during swing phase with episodes of tripping.
4. Decreased knee flexion during swing phase (KF approximately 50 degrees)
5. Ambulation distance x 20 feet with rolling walker with min/limited assist of 1 with c/o shortness of air and fatigue.
6. Arm and leg slightly (moderately, etc.) out of phase 25-50% of the time.
7. Abnormal Posture described quantitatively (anterior trunk flexion 20 degrees)
8. Loss of balance (# of episodes in given time period, # of episodes in challenging situations vs. static position, etc.)
9. Requires moderate cues to advance walker
10. Abnormal gait patterns (shuffling, scissoring, etc.)
11. Fall risk due to foot wear, low vision, environmental issues, "dizziness", proprioception, posture, sensory loss, safety awareness, impulsivity
12. Formal test scores (BERG, Tinetti, GARS, ABC, etc.)

Other documentation tips:

- Focus on more than the distance walked (state reason for goals of increased distance, ie. for restroom ambulation, dining room ambulation, household ambulation, community distances, etc.)
- When patient is at supervision level, focus on strategies being used to increase safety, grading of balance challenges, increasing independence with loss of balance recovery, etc.
- Document observations compared to normal motions in areas such as:

Initiation, continuity, path deviation, guardedness, hesitance, symmetry, pace, diminished propulsion, weaving, waddling, synchrony, staggering, variability, head position,

Important Normative Values for Geriatric Population:

Pre-swing phase
plantarflexion= 15 degrees
hip flexion = 35 degrees

Base of Support = 3 inches

Gait velocity = 78.6 m/minute

Time and Distance
Cadence: 81-125 steps/minute
less than 70 steps/min community walking on street is not recommended

Step Characteristics
Stride length = 1.39m
Step length = 31 inches
Step width = 3 "

Sample Goals for Gait

1. Increase base of support by 2 inches to improve stability and safety during transfers and ambulation.
2. Increase cadence to 75 steps/minute to enable resident to ambulate outdoors, to the facility garden/porch for activities.
3. Increase dorsiflexion by 5 inches on right foot to increase steps and improve foot clearance to prevent falls due to tripping.
4. Increase right knee flexion during swing phase by 10 degrees to increase cadence for patient to be able to go out for family outings.
5. Ambulate 50 feet with rolling walker independently around her room for ADLs and simple homemaking task.
6. Improve arm/heel strike synchrony to 80% of the time to improve stability and assist with energy conservation during ambulation.
7. Increase cadence to 90 steps /min to enable resident to ambulate to and from parking lot to/from church or grocery store.
8. Ambulate 400 feet with AD to and from home to church and for community distances independently on level and unlevel surfaces.