Functional Gait Assessment

Description:
Developed to assess the likelihood of falling in patients with vestibular disorders. This scale was designed to test 10 facets of gait and balance in a more thorough and concise manner than the Dynamic Gait Index.

Equipment needed: 2 Boxes (Shoeboxes)
Stopwatch
Stairs

Completion:
Time: 15 minutes

Scoring: A four-point ordinal scale, ranging from 0-3. “0” indicates the lowest level of function and “3” the highest level of function. Total Score = 30

Interpretation: Not published yet.

Functional Gait Assessment

1. Gait level surface _____
   Instructions: Walk at your normal speed from here to the next mark (6m [20ft])
   Grading: Mark the highest category that applies.
3….Normal: Walks 6m [20ft] in less than 5.5 seconds, no assistive devices, good speed, no evidence for imbalance, normal gait pattern, deviates no more than 15.24-cm (6 in) outside of 30.48-cm (12-in) walkway width.
2….Mild Impairment: Walks 6-m (20-ft) in less than 7 seconds but greater than 5.5 seconds, uses assistive device, slower speed, mild gait deviations, or deviates 15.24-25.4 cm (6-10 in) outside of 30.48-cm (12-in) walkway width.
1….Moderate Impairment: Walks 6-m(20-ft), slow speed, abnormal gait pattern, evidence for imbalance or deviates 25.4 – 38.1 cm (10-15 in) outside of 30.48-cm (12-in) walkway width.
   Requires more than 7 seconds to ambulate 6 m (20-ft).
0…..Severe Impairment: Cannot walk 6 m (20-ft) without assistance, severe gait deviations or imbalance, deviates greater than 38.1-cm (15 in) outside of 30.48-cm (12-in) walkway width or reaches and touches the wall.

2. Change in gait speed _____
   Instructions: Begin walking at your normal pace (for 1.5 m [5ft]), when I tell you “go,” walk as fast as you can (for 1.5 m [5ft]). When I tell you “slow,” walk as slowly as you can (for 1.5 m [5ft]).
   Grading: Mark the highest category that applies.
3….Normal: Able to smoothly change walking speed without loss of balance or gait deviation. Shows a significant difference in walking speeds between normal, fast and slow speeds. Deviates no more than 15.24-cm (6 in) outside of 30.48-cm (12-in) walkway width.
2….Mild Impairment: Is able to change speed but demonstrates mild gait deviations, deviates 15.24 – 25.4 cm (6-10 in) outside of 30.48-cm (12-in) walkway width, or uses an assistive device.
1….Moderate Impairment: Makes only minor adjustments to walking speed, or accomplishes a change in speed with significant gait deviations, deviates 25.4 – 38.1 cm (10-15 in) outside of 30.48-cm (12-in) walkway width or changes speed but has significant gait deviations, or changes speed but loses balance but is able to recover and continue walking.
0…..Severe Impairment: Cannot change speeds, deviates greater than 38.1-cm (15 in) outside of 30.48-cm (12-in) walkway width or loses balance and has to reach for wall or be caught.

3. Gait with horizontal head turns _____
   Instructions: Walk from here to the next mark 6 m (20ft) away. Begin walking at your normal pace. Keep walking straight; after 3 steps, turn your head to the right and keep walking straight while looking to the right. After 3 more steps, turn your head to the left and keep walking straight while looking left. Continue alternating looking right and left every 3 steps until you have completed 2 repetitions each direction.
   Grading: Mark the highest category that applies.
3…..Normal: Performs head turns smoothly with no change in gait. Deviates no more than 15.24-cm (6 in) outside of 30.48-cm (12-in) walkway width.
2….Mild Impairment: Performs head turns smoothly with slight change in gait velocity (i.e., minor disruption to smooth gait path), deviates 15.24-25.4 cm (6-10 in) outside of 30.48-cm (12-in) walkway width or uses an assistive device.
1….Moderate Impairment: Performs head turns with moderate change in gait velocity, slows down, deviates 25.4 – 38.1 cm (10-15 in) outside of 30.48-cm (12-in) walkway width, can continue to walk.
0…..Severe Impairment: Performs task with severe disruption of gait (i.e., staggers 38.1 cm [15 in] outside walkway width, loses balance, stops, or reaches for wall.)
Functional Gait Assessment continued…

4. Gait with vertical head turns

*Instructions:* Walk from here to the next mark (6 m [20 ft]). Begin walking at your normal pace. Keep walking straight; after 3 steps, tip your head up and keep walking straight while looking up. After 3 more steps, tip your head down, keep walking straight while looking down. Continue alternating looking up and down until you have completed 2 repetitions in each direction.

*Grading:* Mark the highest category that applies.

3….Normal: Performs head turns smoothly with no change in gait. Deviates no more than 15.24-cm (6 in) outside of 30.48-cm (12-in) walkway width.

2…..Mild Impairment: Performs task with slight change in gait velocity (i.e., minor disruption to smooth gait path), deviates 15.24-25.4 cm (6-10 in) outside of 30.48-cm (12-in) walkway width or uses walking aid.

1….Moderate Impairment: Performs task with moderate change in gait velocity, slows down, deviates 25.4 – 38.1 cm (10-15 in) outside of 30.48-cm (12-in) walkway width but recovers, can continue to walk.

0…..Severe Impairment: Performs task with severe disruption of gait (i.e., staggers 38.1 cm [15 in] outside walkway width, loses balance, stops, or reaches for wall.)

5. Gait and pivot turn

*Instructions:* Begin walking at your normal pace. When I tell you, “turn and stop,” turn as quickly as you can to face the opposite direction and stop.

*Grading:* Mark the highest category that applies.

3….Normal: Pivot turns safely within 3 seconds and stops quickly with no loss of balance.

2…..Mild Impairment: Pivot turns safely in > 3 seconds and stops with no loss of balance, or pivot turns safely within 3 seconds and stops with mild imbalance, requires small steps to catch balance.

1….Moderate Impairment: Turns slowly, requires verbal cueing, or requires several small steps to catch balance following turn and stop.

0…..Severe Impairment: Cannot turn safely, requires assistance to turn and stop.

6. Step over obstacle

*Instructions:* Begin walking at your normal speed. When you come to the shoe box, step over it, not around it, and keep walking.

*Grading:* Mark the highest category that applies.

3…..Normal: Is able to step over 2 stacked shoe boxes taped together (22.86 cm [9 in] total height) without changing gait speed; no evidence of imbalance.

2…..Mild Impairment: Is able to step over one shoe box (11.43 cm [4.5 in] total height) without changing gait speed; no evidence of imbalance.

1….Moderate Impairment: Is able to step over one shoe box (11.43 cm [4.5 in] total height) but must slow down and adjust to steps to clear box safely. May require verbal cueing.

0…..Severe Impairment: Cannot perform without assistance.

7. Gait with narrow base of support

*Instructions:* Walk on the floor with arms folded across the chest, feet aligned heel to toe in tandem for a distance of 3.6 m (12 ft). The number of steps taken in a straight line are counted for a maximum of 10 steps.

*Grading:* Mark the highest category that applies.

3…..Normal: Is able to ambulate for 10 steps heel to toe with no staggering.

2…..Mild Impairment: Ambulates 7-9 steps.

1….Moderate Impairment: Ambulates 4-7 steps.

0…..Severe Impairment: Ambulates less than 4 steps heel to toe or cannot perform without assistance.
Functional Gait Assessment continued…

8. Gait with eyes closed _____
   Instructions: Walk at normal speed from here to the next mark 6 m (20ft) with your eyes closed.
   Grading: Mark the highest category that applies.
   3….Normal: Walks 6m [20ft], no assistive devices, good speed, no evidence for imbalance, normal gait pattern, deviates no more than 15.24-cm (6 in) outside of 30.48-cm (12-in) walkway width. Ambulates 6 m (20 ft) in less than 7 seconds.
   2….Mild Impairment: Walks 6-m (20-ft), uses assistive device, slower speed, mild gait deviations, deviates 15.24-25.4 cm (6-10 in) outside of 30.48-cm (12-in) walkway width. Ambulates 6 m (20 ft) in less than 9 seconds but greater than 7 seconds.
   1….Moderate Impairment: Walks 6-m (20-ft), slow speed, abnormal gait pattern, evidence for imbalance, mild gait deviations, deviates 25.4 – 38.1 cm (10-15 in) outside of 30.48-cm (12-in) walkway width. Requires more than 9 seconds to ambulate 6 m (20-ft).
   0…..Severe Impairment: Cannot walk 6 m (20-ft) without assistance, severe gait deviations or imbalance, deviates greater than 38.1-cm (15 in) outside of 30.48-cm (12-in) walkway width or will not attempt the task.

9. Ambulating backwards _____
   Instructions: Walk backwards until I tell you to stop.
   Grading: Mark the highest category that applies.
   3….Normal: Walks 6m [20ft], no assistive devices, good speed, no evidence for imbalance, normal gait pattern, deviates no more than 15.24-cm (6 in) outside of 30.48-cm (12-in) walkway width.
   2….Mild Impairment: Walks 6-m (20-ft), uses assistive device, slower speed, mild gait deviations, deviates 15.24-25.4 cm (6-10 in) outside of 30.48-cm (12-in) walkway width.
   1….Moderate Impairment: Walks 6-m (20-ft), slow speed, abnormal gait pattern, evidence for imbalance, mild gait deviations, deviates 25.4 – 38.1 cm (10-15 in) outside of 30.48-cm (12-in) walkway width.
   0…..Severe Impairment: Cannot walk 6 m (20-ft) without assistance, severe gait deviations or imbalance, deviates greater than 38.1-cm (15 in) outside of 30.48-cm (12-in) walkway width or will not attempt the task.

10. Steps _____
    Instructions: Walk up these stairs as you would at home (i.e., using the railing if necessary). At the top, turn around and walk down.
    Grading: Mark the highest category that applies.
    3….Normal: Alternating feet, no rail.
    2….Mild Impairment: Alternating feet, must use rail.
    1….Moderate Impairment: Two feet to a stair, must use rail.
    0…..Severe Impairment: Cannot do safely.

TOTAL SCORE: _______ MAXIMUM SCORE 30