Dynamic Gait Index (DGI)

Patient's full name: _____ **Patient's age:** _____

Patient's gender: _____ **Date of assessment:** _____

What you need:

- A 20-foot walkway, should also be 15 inches wide; shoebox; 2 cones; an area with stairs

1. Gait level surface

Instructions: Walk at your normal speed from her to the next mark (20 feet).

Grading: Mark the lowest category that applies.

Score	Level of function	Criteria
0	Severe impairment	Cannot walk 20 ft. without assistance, severe gait deviations, or imbalance.
1	Moderate impairment	Walks 20 ft., slow speed, abnormal gait pattern, evidence for imbalance.
2	Mild impairment	Walks 20 ft., uses assistive devices, slower speed, mild gait deviations.
3	Normal	Walks 20 ft., no assistive devices, good speed, no evidence of imbalance, normal gait pattern.

2. Change in gait speed

Instructions: Begin walking at your normal pace (for 5 ft.). When I tell you "GO," walk as fast as you can (for 5 ft.). When I tell you "SLOW," walk as slowly as you can (for 5 ft.).

Grading: Mark the lowest category that applies.

Score	Level of function	Criteria
0	Severe impairment	Cannot change speeds, or loses balance and has to reach for wall or be caught.
1	Moderate impairment	Makes only minor adjustments to walking speed or accomplishes a change in speed with significant gait deviations, or changes speed but has significant gait deviations, or changes speed but loses balance but is able to recover and continue walking.
2	Mild impairment	Able to change speed but demonstrates mild gait deviations, or no gait deviations but unable to achieve a significant change in velocity, or uses an assistive device.
3	Normal	Able to smoothly change walking speed without loss of balance or gait deviation. Shows significant difference in walking speeds between normal, fast, and slow speeds.

3. Gait with horizontal head turns

Instructions: Begin walking at your normal pace. When I tell you "LOOK RIGHT," keep walking straight, but turn your head to the right. Keep looking to the right until I tell you "LOOK LEFT," then keep walking straight and turn your head to the left. Keep your head to the left until I tell you "LOOK STRAIGHT". then keep walking straight but return your head to the center.

Grading: Mark the lowest category that applies.

Score	Level of function	Criteria
0	Severe impairment	Performs task with severe disruptions of gait (i.e. staggers outside 15 inches path, loses balance, stops, reaches for wall).
1	Moderate impairment	Performs head turns with moderate change in gait velocity, slows down, staggers but recovers, can continue to walk.
2	Mild impairment	Performs head turn smoothly with slight change in gait velocity (i.e. minor disruption to smooth gait path or uses walking aid).
3	Normal	Performs head turns smoothly with no change in gait.

4. Gait with vertical head turns

Instructions: Begin walking at your normal pace. When I tell you "LOOK UP," keep walking straight, but tip your head and look up. Keep looking up until I tell you "LOOK DOWN." Then keep walking straight and turn your head down. Keep looking down until I tell you "LOOK STRAIGHT," then keep walking straight, but return your head to the center.

Grading: Mark the lowest category that applies.

Score	Level of function	Criteria
0	Severe impairment	Performs task with severe disruptions of gait (i.e. staggers outside 15 inches path, loses balance, stops, reaches for wall.
1	Moderate impairment	Performs task with moderate change in gait velocity, slows down, staggers but recovers, can continue to walk.
2	Mild impairment	Performs task with slight change in gait velocity (i.e. minor disruption to smooth gait path or uses walking aid).
3	Normal	Performs head turns with no change in gait.

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 lowest category that applies.

Score	Level of function	Criteria
0	Severe impairment	Cannot turn safely, requires assistance to turn and stop.
1	Moderate impairment	Turns slowly, requires verbal cueing, requires several small steps to catch balance following turn.
2	Mild impairment	Pivot turns safely in > 3 seconds and stops with no loss of balance.
3	Normal	Pivots and turns safely within 3 seconds and stops quickly with no loss of balance.

6. Step over obstacles

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

Grading: Mark the lowest category that applies.

Score	Level of function	Criteria
0	Severe impairment	Cannot perform without assistance.
1	Moderate impairment	Able to step over box, but must stop, then step over. May require verbal cueing.
2	Mild impairment	Able to step over box, but must slow down and adjust steps to clear box safely.
3	Normal	Able to step over box without changing gait speed; no evidence of imbalance.

7. Step around obstacles

Instructions: Begin walking at your normal speed. When you come to the first cone (about 6 ft. away), walk around the right side of it. When you come to the second cone (6 ft. past first cone), walk around it to the left.

Grading: Mark the lowest category that applies.

Score	Level of function	Criteria
0	Severe impairment	Unable to clear cones, walks into one or both cones, or requires physical assistance.
1	Moderate impairment	Able to clear cones but must significantly slow speed to accomplish task, or requires verbal cueing.
2	Mild impairment	Able to step around both cones, but must slow down and adjust steps to clear cones.
3	Normal	Able to walk around cones safely without changing gait speed; no evidence of imbalance.

8. Steps

Instructions: Walk up these stairs as you would at home (i.e. using the rail if necessary). At the top, turn around and walk down.

Grading: Mark the lowest category that applies.

Score	Level of function	Criteria
0	Severe impairment	Cannot perform safely.
1	Moderate impairment	Two feet to a stair; must use rail.
2	Mild impairment	Alternating feet, must use rail.
3	Normal	Alternating feet, no rail.

Total score: _____

Remarks/Comments

Name of examiner: _____ Examiner's signature: _____

Scoring and interpretation

The Dynamic Gait Index, also known as DGI, is an assessment developed to assess the likelihood of falling in older adults. The scale is a four-point ordinal scale ranging from 0 to 3, where 0 indicates the lowest level of function, and 3 represents the highest.

The **total possible score is 24**.

A score of **≤19/24** is predictive of falls in the elderly.

Reference

Shumway-Cook, A., & Woollacott, M. (1995). *Motor control theory and practical applications* (pp. 322–324). Williams & Wilkins.