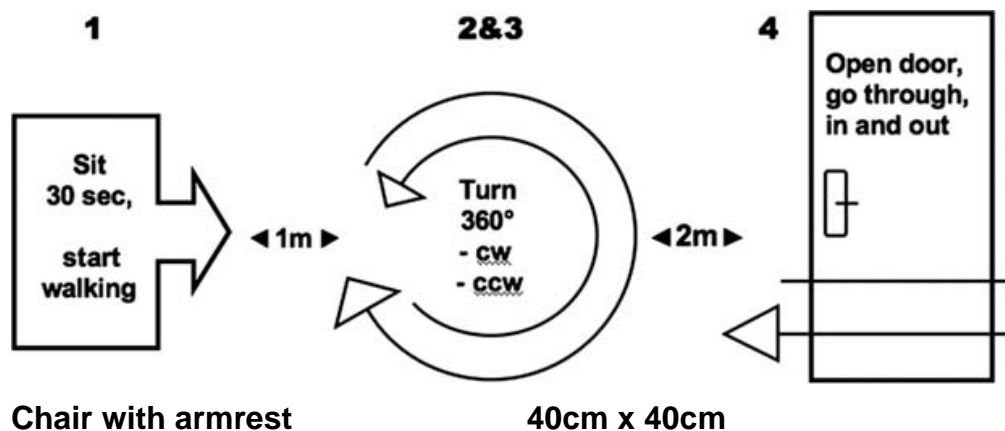


Introduction

The Ziegler test is designed to be used in the clinical setting as a fast and cheap tool to assess the severity of freezing of gait (and presence of festination) in people with Parkinson's disease. People with Parkinson's disease are asked to complete a walking course that encompasses several elements known to trigger freezing, such as turning and walking through a doorway. The test is repeated under three conditions with increasing difficulties. Their performance is rated using a four-point scale (0 to 3), with a total score ranging from 0 to 36.

Freezing of gait provoking course



- The patient starts by sitting on a chair that is set up 3.4 m in front of a closed door.
- After 30 s, the patient stands up and walks forwards by 1 m to a square (40 cm x 40 cm) on the ground where they perform two 360 degrees turns within the square, one clockwise and one counterclockwise.
- Following that, the patient walks forward 2 m to a door, where they have to open and walk **through** the door.
- The patient is asked to walk fast but as safely and fluently as possible.

This test is completed under three conditions.

1. Walking
2. Walking + carrying a tray with a cup of water
3. Walking + carrying a tray with a cup of water + calculation (e.g., counting backwards by 7s from 100)

4 situations are assessed in each condition.

1. Start
2. Turn clockwise
3. Turn counterclockwise
4. Doorway

Instructions / Definitions

(a) Rate each situation (from 0 to 3)

0 points: No festination and no freezing of gait detected

1 points: Observation of festination or any hastening steps (“shuffling”).

- Festination is considered to be small, disturbed, and rapid steps which left the patient with some degree of advancement.

2 points: Observation of freezing of gait (trembling-in-place or total akinesia) which the patient could overcome themselves.

- Trembling-in-place is considered as a stop of locomotion with tremulous legs and no advancement.
- Total akinesia is considered as a stop of locomotion with no advancement and without any leg movements.

3 points: Abortion of the test or any need of interference by the examiner (e.g., an acoustic or visual one-off cue to overcome the freezing of gait episode).

(b) Determine the time taken to complete each condition (in seconds, to 2 decimal places)

Start: In *standing*, from the moment the first foot of the person clears the ground and progresses forward by any degree.

- Note: This is regardless of whether the person achieves final extended alignment in standing prior to stepping forward. For conditions with the additional tasks, the start of the trial is after the participant has the tray in both hands

End: The moment both feet of the person clear the doorway as they step out of the room.

(c) Use scoresheet 1 for original research method

(d) Use scoresheet 2 for more flexibility to make adaptations to situations, to score specific situations, or to modify conditions (type of dual tasks).

- Modified by B. Farley 2023



Name: _____ Date: _____

- 0 points:** no festination or FOG observed
- 1 point:** observation of festination or any hastening steps (shuffling)
- 2 points:** observation of FOG (trembling in place or total akinesia), which the patient could overcome themselves
- 3 points:** any abortion of the task or any need of interference by the examiner (e.g. an acoustic or visual cue to overcome the FOG episode)

Condition	Situation	Score				Duration (s) to 2 decimal places
		0	1	2	3	
Walking	Start	0	1	2	3	
	Turn clockwise	0	1	2	3	
	Turn counterclockwise	0	1	2	3	
	Doorway	0	1	2	3	

Condition	Situation	Score				Duration (s) to 2 decimal places
		0	1	2	3	
Walking + Carrying	Start	0	1	2	3	
	Turn clockwise	0	1	2	3	
	Turn counterclockwise	0	1	2	3	
	Doorway	0	1	2	3	

Condition	Situation	Score				Duration (s) to 2 decimal places
		0	1	2	3	
Walking + Carrying + Calculation	Start	0	1	2	3	
	Turn clockwise	0	1	2	3	
	Turn counter clockwise	0	1	2	3	
	Doorway	0	1	2	3	

TOTAL SCORE (0-36): _____

TOTAL DURATION: _____

COMMENTS:

