

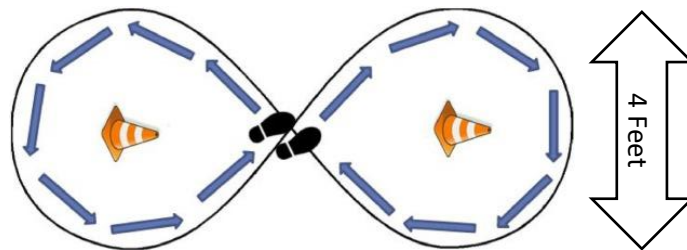
## Figure of 8 Walk Test

Name : \_\_\_\_\_ Date: \_\_\_\_\_

The Figure of 8 Walk was designed to measure motor skill (speed, amplitude and accuracy of movement) in walking. Different executive functions are required to walk in a curved path than a straight one. The F8WT can provide valuable information on daily walking ability of an individual as compared to straight path measures alone.

The test involves walking a figure of eight pattern about two markers placed 5 feet apart.

Starting in the middle between the two markers, the subject walks around one marker, then between the markers and around the other marker, finishing where the walk started between the markers (figure of 8 around the markers)



### Performance is scored based on

1. the time to complete the figure 8 walk (speed),
2. the number of steps to complete the walk (amplitude), and
3. whether the walker remained within a space, 2 feet or less from the markers in all directions (accuracy).

### Smoothness score is based on:

4. changes in pace (1 point for consistent pace for entire walk pattern) completing the walk without stopping (1 point)
5. hesitancy, such as submovements to adjust position or complete curve about a marker (1 point for no hesitation)
6. changes in pace (1 point for consistent pace for entire walk pattern)

### Performance Summary:

<b>SPEED:</b> Time to complete figure of 8 walk		seconds
<b>AMPLITUDE:</b> # steps to complete F8WT		steps
<b>ACCURACY:</b> Walk completed within a 2-foot space about markers		Yes No

**Smoothness:** range from 0– 3 points; higher scores indicating greater smoothness.

<b>Walk completed without stopping</b>	Yes = 1 point	No = 0 points
<b>Walk completed without hesitancy</b> (no adjusting position / path)	Yes = 1 point	No = 0 points
<b>Walk completed with no changes in pace</b>	Yes = 1 point	No = 0 points

Time: \_\_\_\_\_ sec, \_\_\_\_\_ # of Steps , IN or OUT bounds, Smoothness Score \_\_\_\_/3

# Figure of 8 Walk Test

## Intended Population

Older adults with a mobility disability<sup>[1]</sup>.

## Method of Use

The following summary comes from Hess et al<sup>[1]</sup>. Please see their report for a thorough description for administering the test: The F8WT uses a path where the participant is asked to walk a figure of eight shape around two cones. Scores are recorded in three areas: 1) speed (time for completion), 2) amplitude (number of steps taken), and 3) accuracy or "smoothness".

## Reliability

A small number of studies with low numbers of participants have tested the reliability of the F8WT. The pilot study (n=51) for the F8WT reports that both the inter-rater reliability for F8W time and steps and the test-retest reliability for F8W time were acceptable for clinical measures but lower than other composite measures of mobility<sup>[1]</sup>.

F8WT test times have shown excellent intra-rater, inter-rater and test–retest reliabilities in those with stroke specific impairments<sup>[2]</sup>.

## Validity

It is valid for testing constructs of mobility such as gait speed, gait abnormality, physical function in activities of daily living and movement control and planning<sup>[1]</sup>.

## Responsiveness

The F8W test has been shown to detect differences in gait between healthy older adults and older adults who have had a stroke<sup>[2]</sup>. The F8WT has been used to show changes in gait speed and step count in a study of relatively healthy older adults (n=40) in the context of using exercise to improve direction changes and falls efficacy<sup>[3]</sup>.

## Miscellaneous

It has been put forward<sup>[4]</sup> that different executive functions are required to walk in a curved path than a straight one and that performance of the F8WT can provide valuable information on the the daily walking ability of an individual as compared to straight path measures alone<sup>[4]</sup>.

Current studies on the F8WT acknowledge small study samples as a limitation to their results<sup>[1]</sup>. Further studies with greater numbers of participants are required to further validate the test for different populations e.g. specific cardiorespiratory, orthopaedic or neurological conditions and provide data sets for healthy populations.