Core Measure: 10 Meter Walk Test

Overview	• The 10MWT assesses walking speed in meters/second over a short distance.
Number of Test Items	• One test item • The test can be completed in two conditions: comfortable walking speed and fast walking speed. 2 trials should be completed in each condition. The average between the two trials should be recorded as walking speed in meters/second. (Steffen, 2008) • Comfortable walking speed has been associated with less measurement error, and should be completed first if doing both conditions. (Tyson, 2009)
Scoring	• The time taken to ambulate 6 meters is recorded to the nearest 1/100 of a second. 6 meters is then divided by the time taken to ambulate and recorded in meters/second. (Watson, 2002, Steffen, 2008)
Equipment	• Stopwatch • A clear pathway of at least 10 meters (32.8 feet) in length in a designated area over solid flooring (Stephens, 1999, Watson, 2002)
Time (new clinician) **Time (experienced clinician)**	• 5 minutes or less • 5 minutes or less
Cost	• Free
Logistics-Setup	• A clear pathway of at least 10 meters (32.8 feet) in length in a designated area over solid flooring is required. • Measure and mark the start and end point of a 10 meter walkway. • Add a mark at 2 meters and 8 meters (identifying the central 6 meters which will be timed). • Quiet conditions (Steffen, 2008)

Logistics-Administration	• Comfortable walking speed:
	  ○ Have the patient start on the 0 meter mark.
	  ○ Instructions to patient: "Walk at your own comfortable walking pace and stop when you reach the far mark."
	• Fast walking speed:
	  ○ Have the patient start on the 0 meter mark (start line)
	  ○ Instructions to patient: "Walk as fast as you can safely walk and stop when you reach the far mark."
	• Rest breaks are allowed between trials, if needed.
	• When administering the test, do not walk in front of or directly beside

	the patient, as this "paces" the patient and can influence the speed and distance they walk. Instead, walk at least a half step behind the patient.

Logistics-Scoring	• Individuals walk without physical assistance of another person for a distance of 10 meters.
	• The time is measured for the intermediate 6 meters to allow for patient acceleration and deceleration. (Tyson, 2009, Steffen, 2008).
	  ○ The time is started when any part of the leading foot crosses the plane of the 2 meter mark.
	  ○ The time is stopped when any part of the leading foot crosses the plane of the 8 meter mark. (Steffen, 2008).

Additional Recommendations	• To track change, it is recommended that this measure is administered a minimum of two times (admission and discharge), and when feasible, between these periods, under the same test conditions for the patient.

Common Questions and Variations

1. "Can the patient use physical assistance to ambulate?"
    a. No, the patient must be able to walk unassisted to complete the test. The requirement of assistance may reduce the validity and reliability of the test by causing the patient to walk at a different speed than he/she would be able to safely ambulate on their own. If there is a safety concern regarding the patient's walking ability, the recommendation would be to stand near the patient but slightly behind without any physical contact.
    b. If the patient requires physical assistance to perform the test, he/she would receive a score of 0 meters/second for this test. This would be their baseline score. It is recommended to collect a baseline score on all patients, even if this means that they will receive a 0 m/s.
    c. If the patient attempts the test and does complete it with assistance, the clinician should document the quality of this performance, even though the score is "0". The details of assistance level and quality of movement will be valuable to the clinician who re-administers the test at a later date. This will provide more information for this clinician to better interpret the influence of this factor on observed change in performance (Salbach 2017)
2. What if my patient cannot complete 2 trials?
    a. Two trials is highly recommended to achieve the most accurate information. If a patient cannot tolerate 2 trials, it is acceptable to document the score for one trial only.
3. What if my patient cannot complete trials under both conditions of "comfortable" and "fast" walking speed?
    a. It is recommended to start the test with the "comfortable walking speed" condition.

b. Consider that if a patient has goals to return to the community, the assessment of fast walking speed has more value. If a patient has the ability to walk fast, he/she may be able to more fully participate in the community and adapt to environmental context. If the projected outcome for the patient is community ambulation, a fast gait speed should be collected at the earliest time point possible, and re-testing is recommended to track change.

4. "Where should the therapist stand and guard?"
    a. Standing behind the patient will reduce the likelihood of the clinician setting the pace and will also keep the clinician and stop watch out of sight of the patient to reduce the likelihood of the patient "racing." (Watson, 2002)
5. "Can the patient use an assistive device during the test?"
    a. Yes, the patient can use an assistive device during the test. Recommendations would be to document the assistive device and keep the assistive device consistent between trials and reassessments. Inappropriate assistive devices can have a negative impact on walking speed and therefore reduce the validity of the test. (Watson, 2002).
    b. It is likely, however that the type of assistive device may change over time. This is ok, just be sure to document which type of device is used. Typically the less restrictive a device is, the faster the patient will go.
6. "Can the patient use orthotics or bracing during the test?"
    a. Yes, the patient should wear the walking devices necessary for ambulation (AFO, KAFO, Neuroprostheses, etc). The walking device should be documented and kept consistent between trials and assessments. (Jackson, 2008)
    b. If the patient no longer needs the orthosis which was used in the initial test, it would be appropriate to repeat the test without the orthosis and document this fact.
    c. Expert opinion would recommend using what the patient is most likely to use in their own environment.
7. "What if I don't have 10 open meters to do the assessment?"
    a. Variations to the 10 meter walk test exist, including the 5 meter walk test. Clinical recommendations would be to utilize a "rolling start and finish" during the 5 meter walk test to allow for acceleration and deceleration. It is important to note that the 5 meter walk test has not been validated in as many conditions as the 10 meter walk test. (Tyson, 2009, Jain, 2016)
8. "Should I count the number of steps taken to complete the 10 Meter walk test?"
    a. You can! The steps to complete may provide insight into stride length. Although documenting this number may add individual value to specific clinical situations, there has not been extensive research in this area validating the observational step count in various neurological conditions. (Watson, 2002)

References

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