



The Two Minute Walk Test: Summary

Equipment:

- Chair
- Trundle Wheel
- Stopwatch/clock
- Pylons (to mark start/end positions on course)
- Tape (to mark patient's end position)
- Clipboard
- Walking Course – 50 feet in length (15.24 m) – ideally a 30m corridor

American Thoracic Society Recommendations [1]:

Absolute Contraindications: (or as per physician discretion)

- Unstable angina during the previous month
- Myocardial infarction during the previous month – patient may have had angioplasty or heart surgery to address this

Relative Contraindications:

- Resting heart rate > 120 bpm
- Systolic blood pressure > 180 mmHg
- Diastolic blood pressure > 100 mmHg

Other Situations to Consider Deferral:

- Conditions impairing ability to walk any distance, including:
 - Severe fatigue
 - Pain
 - Musculoskeletal problems impairing mobility

Criteria for Immediate Stoppage of Test:

- Chest pain
- Intolerable dyspnea
- Leg cramps
- Staggering
- Diaphoresis
- Pale or ashen appearance

Test Stoppage Procedures:

- Have the patient sit or lie down depending on the severity of the event
- Obtain blood pressure, heart rate, oxygen saturation
- Identify need for additional medical intervention

Testing Procedures:

- The patient can use a gait aid and assistance from others as required to complete the test safely
- If the patient requires supplemental oxygen this should be used during the test
- A “warm-up” is not permitted prior to beginning the test
- Ideally, the patient should be allowed 10 minutes of rest before beginning the test

Instructions:

(Standardized instructions adapted from 6 minute walk test [1])

“The object of this test is to walk as far as possible for 2 minutes. You will walk back and forth in this hallway. Two minutes is a long time to walk, so you will be exerting yourself. You will probably get out of breath or become exhausted. You are permitted to slow down, to stop, and to rest as necessary. You may lean against the wall while resting, but resume walking as soon as you are able.”

“You will be walking back and forth around the cones. You should pivot briskly around the cones and continue back the other way without hesitation. Now I’m going to show you. Please watch the way I turn without hesitation.”

Demonstrate by walking one lap yourself. Walk and pivot around a cone briskly.

“Are you ready to do that? I am going to use this counter to keep track of the number of laps you complete. I will click it each time you turn around at this starting line. Remember that the object is to walk AS FAR AS YOU CAN for 2 minutes, but don’t run or jog.”

“Start now, or whenever you are ready.”

Begin timing as soon as the patient starts walking.

At 1 minute, provide the following standardized encouragement:

“You are doing well. You have 1 minute to go.”

At 2 minutes, end the test by saying “Stop”. Have the patient stop and stand in place where they are. Mark the spot where they stopped.

If the patient stops walking during the test and needs a rest, say this:

“You can lean against the wall or sit if you would like; then continue walking whenever you feel able.”

Do not stop the timer.

Scoring:

- Count the number of laps completed
- Measure the additional distance covered (number of metres in the final partial lap) with the trundle wheel
- Calculate the total distance walked using the equation below:

(number of laps: _____ x _____ metres/lap) + final partial lap distance: _____ metres = _____ metres

Population Norms [2]:

Table 4 Norms for the 2MWT distance

Participants by Sex and Age Category, y (n)	Distance, m (mean [95% CI])	Distance, m/BMI (mean [95% CI])
Women		
18–54 (539)	183.0 (180.8–185.3)	6.82±0.09 (6.64–6.99)
55–59 (30)	176.4 (168.1–184.8)	6.41±0.35 (5.71–7.11)
60–64 (48)	166.4 (158.2–174.5)	6.26±0.26 (5.74–6.79)
65–69 (22)	155.2 (140.6–169.8)	5.48±0.45 (4.55–6.41)
70–74 (33)	145.9 (136.9–154.9)	5.01±0.31 (4.38–5.65)
75–79 (14)	140.9 (121.8–159.9)	5.58±0.54 (4.41–6.76)
80–85 (34)	134.3 (125.7–142.9)	5.01±0.19 (4.63–5.39)
Men		
18–54 (260)	200.9 (197.2–204.6)	7.40±0.13 (7.15–7.66)
55–59 (23)	191.0 (176.8–205.2)	6.92±0.38 (6.13–7.71)
60–64 (29)	179.1 (165.4–192.8)	6.43±0.33 (5.75–7.11)
65–69 (22)	184.2 (170.7–197.8)	7.08±0.35 (6.36–7.80)
70–74 (32)	172.4 (163.8–180.9)	6.50±0.26 (6.00–6.56)
75–79 (19)	157.6 (140.3–174.9)	5.78±0.44 (4.85–6.70)
80–85 (32)	144.1 (132.6–155.6)	5.74±0.30 (5.14–6.34)

Abbreviations: distance, mean 2MWT distance; distance/BMI, mean 2MWT distance normalized by BMI.

References:

- [1] American Thoracic Society. ATS statement: guidelines for the six-minute walk test. *Am J Respir Crit Care Med*. 2002;166(1):111-117.
- [2] Bohannon RW, Wang YC, Gershon RC. Two-minute walk test performance by adults 18 to 85 years: normative values, reliability, and responsiveness. *Arch Phys Med Rehabil*. 2015;96(3):472-477.