

Pulmonary Diagnostics: 6 Minute Walk Test (6MWT)

Site Applicability

St. Paul's Hospital

Practice Level

Respiratory Therapists

Requirements

The function of a 6MWT is to assess exercise tolerance and response to therapy in chronic conditions.

Testing should be performed on a flat, hard surface. The patient's effort is self-paced and they should be encouraged to rest as frequently as required. The patient may rest by stopping or leaning against the wall, but as soon as they need to sit down, the test must be terminated.

If a patient requires long-term oxygen therapy, oxygen should be provided at their prescribed flow rate for the duration of the test unless specifically requested otherwise.

If the patient uses a mobility aid (e.g. cane, walker, etc.) at home, they should use this for the test.

Need to Know

Special Considerations

- Patients should wear comfortable clothing and appropriate shoes for exercising
- Patients should not discontinue medications prior to a walk test
- Vigorous exercise should not occur prior to a walk test. Patients should rest for 10 minutes prior to testing.
- Patients with conditions affecting circulation should be given a forehead probe to accurately measure SpO₂.

Contraindications

Absolute

- Unstable angina and/or MI within one month

Relative

- Resting heart rate (HR) exceeding 120 bpm
- Systolic blood pressure exceeding 180 mmHg
- Diastolic blood pressure exceeding 100 mmHg



Equipment and Supplies

- Portable SpO₂ monitor + probe
- Stopwatch
- 6MWT worksheet
- Borg scale
- Pylons
- Distance measuring wheel
- Blood pressure monitor
- Oxygen tank stroller (if required)

Procedure

Assessment

Prior to conducting the 6MWT:

- Measure and record height and weight, resting Blood Pressure (BP), SpO₂, HR, and BORG scale rating.
- Patients should be instructed to walk at a faster than normal pace along the measured distance of a walkway (50 metres roundtrip). The RT should provide verbal encouragement throughout testing and allow the patient to rest as needed.

Steps

1. Verify the order and confirm there are no contraindications for testing.
2. Check to ensure the walkway is free from obstructions. Place a pylon at one end of the walkway and, using the distance measuring wheel, place the second pylon 25 m away from it.
3. Instruct the patient to stand beside the pylon at one end of the hallway.
 - **“The object of this test is to walk as far as possible for 6 minutes. You will walk back and forth in this hallway. Six minutes is a long time to walk, so you will be exerting yourself. If you become too tired or short of breath, 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 between the markers. You should pivot briskly at the markers and continue back the other way without hesitation. Now, I’m going to show you. Please watch the way I turn without hesitation.”**
 - **“Remember that the object is to walk AS FAR AS POSSIBLE for 6 minutes, but don’t run or jog. When the 6 minutes are up I will tell you to stop. I want you to stop right where you are and I will come to you. Start now or whenever you are ready.”**
4. Monitor the patient during the walk test and record:
 - Number of laps completed



- If the patient requires the use of supplemental oxygen, record O₂ flowrate, O₂ delivery device (continuous vs. pulsed O₂), and whether O₂ device was pushed/pulled or carried.
- Any limitations or difficulties the patient has during testing
- If the patient requires a mobility aid

During testing, provide verbal encouragement at each 1-minute interval such as, “you are doing well, you have five minutes to go”, “keep up the good work, you have four minutes to go”, “you are doing well and are halfway done”. **Do not use verbal/body language to encourage the patient to speed up their pace during testing.**

If the patient stops walking during the test and needs a rest, tell them: ***“You can lean against the wall if you would like; then continue walking when whenever you feel able.”*** Do not stop the timer. If the patient stops before the 6 minutes are up and declines to continue (or you decide that they should not continue), wheel a chair over for the patient to sit on, discontinue the walk, and note on the worksheet the distance, the time stopped, and the reason for stopping prematurely.

5. When the timer is 15 seconds from completion, inform the patient, ***“in a moment I’m going to tell you to stop. When I do, just stop right where you are and I will come to you.”***
6. When the six minutes has concluded, ask the patient to stop. Walk over to them and mark the spot where they stopped by placing a marker on the floor. Using the distance measuring wheel, measure the total distance the patient walked and document this on the 6MWT worksheet.

Note: Testing may be concluded at any time if the patient experiences angina, intolerable dyspnea, leg cramping, dizziness/staggering, diaphoresis, significant drop in oxygen saturation, and/or has a pale or ashen appearance. Unstable patients should be assessed medically by on call Respiriologist or directed to ER.

7. Post test, measure and record resting BP, SpO₂, HR, and BORG scale rating (resting BP is measured to confirm that the patient is safe to leave the department).

Documentation

1. Use the Six Minute Walk Test Powerform to document the test in PowerChart. Use the comment field to note supplemental oxygen use and/or any other relevant information obtained during testing.
2. Print one copy of the completed 6MWT Powerform and place in patient’s paper chart for dictation by Respiriology.

References

1. ATS Statement: Guidelines for the Six Minute Walk Test. AM J Respir Crit Care Med Vol 166 pp. 111-117, 2002.
2. Am J Respir Crit Care Med Vol. 204, P5-P6, 2021. ATS Patient Education Series.
<https://www.thoracic.org/patients/patient-resources/resources/six-minute-walk-test.pdf>

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