Modified 6 Minute Walk Test (m6MWT) instructions

Perform this test if patient meets the following stage: 3B) Functional Walking Capacity – Independent Household Ambulator: ability to ambulate daily using reciprocal steps over ground for short distances (10-100m) independently. Person may use assistive devices and/or orthoses with the exception of bilateral KAFOs).

Time to needed to complete assessment: 5-10 minutes for set-up, 6 minutes for the test.

Equipment needed: stopwatch, course with distances marked at least every 5m; vital signs monitoring equipment, Borg scale.

Set Up: A flat, smooth, non-slippery surface, with no disturbing factors, is required and the pathway should contain as few turns as possible (preferably a large round or oval shaped path). Distances should be marked at least every 5 meters.

Therapist Instructions:

- Monitor vital signs before and after each test if indicated. Allow the patient to initiate the start of the test. At each minute, inform the patient about the time that is left, ask whether the patient feels fine, and motivate the patient by providing standardized encouragement using the phrases, “You’re doing well!” or “Keep up the good work!”. The patient is allowed the use of walking aids but no physical assistance is permitted. You may walk behind the patient but you may not be in their field of vision. The patient is allowed to stand and rest but is not allowed to sit down or lean against a support to rest during the test so once the patient needs to sit down or lean against a support, record that distance and time as the “total distance achieved” and “total time for the test”.

- Scoring: total distance walked, time of test if less than 6 minutes, and walking aid(s) used. If the patient is walking with multiple walking aids and is independent with one but requires supervision with another, the test should be done with the walking aid where the patient is independent. Additionally, for the purposes of the Standing and Walking data collection, please record the distance the participant has walked at each of the following time points that the participant reaches: 2 minutes, 4 minutes, and 6 minutes. The therapist may want to record the number of rests but this is not required on the data collection form. Physiological measures such as dyspnea and the level of fatigue can be reported using the Borg Scale.

- Stop testing based on the following criteria:
  1. Any of the following symptoms:
     a. angina (chest pain or tightness)
     b. Light-headedness
     c. Confusion
     d. Ataxia, staggering unsteadiness
     e. Pallor
f. Cyanosis

g. Nausea

h. Marked dyspnea

i. Unusual fatigue

j. Signs of peripheral circulatory insufficiency

k. Claudication or other significant pain

l. Facial expressions signifying distress

2. Abnormal cardiac responses

   a. Systolic blood pressure drops < 10mmHg

   b. Systolic blood pressure rises > 250 mmHg

   c. Diastolic blood pressure rises to > 120 mmHg

   d. Heart rate drops more than 15 beats per minute (given the subject was walking the last minute of the test vs. resting)

Notify physician if test is terminated for any of the above reasons.

**Patient Instructions:** “The goal of this test is to assess the distance you can cover during 6 minutes. I will inform you every minute about the time you have left. If you feel uncomfortable, you can stop at any time. If you need to sit down or lean against a support that will be the end of the test. Although I will clock the time, perform this test at your own preferred speed.”

**Clinical reference values:**

**Minimal Detectable Change** = 45.8 meters (150 feet) or a 22% change in Incomplete SCI; C2-L1; < 12 months post injury


**Norms:**

<table>
<thead>
<tr>
<th>AIS D patients, N= 18</th>
<th>Experimental environment</th>
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<tbody>
<tr>
<td>Mean</td>
<td>382.39m</td>
</tr>
<tr>
<td>Median</td>
<td>371.75</td>
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<tr>
<td>Min</td>
<td>151</td>
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<tr>
<td>Max</td>
<td>560</td>
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**Comparison of Walking Speed With Upper Motor Neuron Lesions During the SCILT:**
<table>
<thead>
<tr>
<th>Months after entry to trial</th>
<th>Metres in 6MWT</th>
<th>Walking Speed in m/s (SD), over 6 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>230.4 (21.6)</td>
<td>0.64 (0.06)</td>
</tr>
<tr>
<td>6</td>
<td>284.4 (18)</td>
<td>0.79 (0.05)</td>
</tr>
<tr>
<td>12</td>
<td>302.4 (21.6)</td>
<td>0.88 (0.06)</td>
</tr>
</tbody>
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\( n = 66 \), AIS-C and D; with lesions between C-5 and L-3