The Walking Index for Spinal Cord Injury (WISCI) is a functional capacity scale designed to measure improvements in ambulation in persons with spinal cord injury, by evaluating the amount of physical assistance, braces or devices required to walk 10 meters. The WISCI II is currently the most recent version.

Participants are progressed systematically through a validated sequence of capacity levels, incorporating devices and personal assistance, to their maximum walking capacity. The purpose of the WISCI II is to understand the severity of underlying impairment rather than the need for physical assistance, walking aids or braces, etc.

For WISCI II, a score from 0 to 20 is assigned. Level 0: “patient is unable to stand and/or participate in walking” to level 20: “ambulates with no devices, with brace and no assistance”.

**Clinical Considerations**

- There is minimal additional burden for clinicians to use the WISCI II as the test falls into typical clinical practice parameters.
- A score is possible even if the individual cannot walk 10 m. However, because the furthest walk distance is 10m, it may not be suitable for individuals with minor impairments.
- It would be useful to incorporate the WISCI II into clinical practice and to evaluate new SCI therapies. Additional tests may be necessary to assess endurance (e.g. 6MWT) and/or walking speed (eg.10MWT), especially for individuals with greater walking capacity.

**Availability**

- WISCI I: [http://www.scireproject.com/sites/default/files/worksheet_wisci_i.docx](http://www.scireproject.com/sites/default/files/worksheet_wisci_i.docx)
- **Languages:** English
### Minimal Clinically Important Difference

<table>
<thead>
<tr>
<th>Standard Error of Measurement:</th>
<th>Typical Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>WISCI level = 0.318 (Scivoletto et al., 2014; N=33, subacute and chronic incomplete SCI, median days since SCI = 40)</td>
<td>Mean (SD) Scores: 16.9 (3.4); range = 11-20</td>
</tr>
<tr>
<td>WISCI speed = 0.05 m/s (Musselman, 2007; N=19, chronic incomplete SCI, mean time since injury = 6.97 years)</td>
<td>(Wirz et al. 2010; n=42, 33 male, chronic SCI, mixed injury types, mean time since injury (SD) = 66.5 (66.2) months)</td>
</tr>
</tbody>
</table>

### Statistical Error

- **Minimal Detectable Change:**
  - Comfortable WISCI level: 0.785 m/s
  - Comfortable WISCI speed: 0.254 m/s
  - Maximum WISCI level: 0.597 m/s
  - Maximum WISCI speed: 0.163 m/s

### Typical Values

<table>
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<tr>
<th>Mean (SD)</th>
<th>Range</th>
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<td>11-20</td>
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</table>

### Measurement Properties

#### Validity – Moderate to High

- **High correlation with Spinal Cord Independence Measure (SCIM-III):**
  - Correlation = 0.607

- **High correlation with Barthel Index (BI):**
  - Correlation = 0.633
  (Menon et al., 2015; N=66, 20 male, mixed injury types)

- **High correlation with 6 Minute Walk Test (6MWT):**
  - Correlation = 0.68-0.76

- **High correlation with Berg Balance Scale (BBS):**
  - Correlation = 0.89-0.92
  (Ditunno et al., 2007; N=146, 114 male, inpatient, incomplete SCI)

- **Moderate to High correlation with ASIA Motor Score:**
  - **UEMS:** Correlation = 0.496-0.502
    (Burns et al., 2011; N=41, tetraplegic only)
  - **LEMS:** Correlation =0.572-0.717
    (Burns et al. 2011, N=76, 60 male, 74 chronic incomplete SCI, mean time since injury (SD) = 6.32 (5.99) years)

#### Reliability – High

- **High Test-retest Reliability:**
  - ICC = 0.930-0.995
  (Burns et al. 2011, N=76, 60 male, 74 chronic incomplete SCI, mean time since injury (SD) = 6.32 (5.99) years)
  - ICC = 0.975-0.996

- **High Inter-rater Reliability:**
  - ICC = 0.979-0.999
  (Scivoletto et al., 2014; N=33, subacute and chronic incomplete SCI, median days since SCI = 40)

**Number of studies reporting reliability data:** 5

#### Responsiveness

**Number of studies reporting validity data:** 12
Floor/Ceiling Effect:
44.8% at ceiling (Lemay & Nadeau 2010; N=32, 25 male, AIS D mixed injury types, mean time since injury (SD) = 77.2 (44.3) days)

95.5% at ceiling (van Hedel et al., 2006; N=22, 18 male, incomplete SCI, within 1 year post-injury)

Effect Size:
0.46 (Musselman, 2007; N=19, chronic incomplete SCI, mean time since injury = 6.97 years)

Number of studies reporting responsiveness data: 6