### Assessment Overview

#### Assessment Area

**ICF Domain:**
Body Function

**Subcategory:**
Neuromusculoskeletal & Movement-related Functions and Structures

#### Summary

The Wartenberg Pendulum Test was introduced in the 1950s as a diagnostic tool of spasticity. It was originally a qualitative measure (clinician simply observed the leg swing). The use of electronic equipment to generate quantitative data was introduced in the 1980’s. This test has not been validated in a SCI specific population and its validity in other populations is debated.

#### You Will Need

**Length:**
1 test, recommended to be repeated up to 4 times at 1 minute intervals
Less than 5 min per test

**Equipment:**
Typically either electrogoniometers, uni-planar video or 3D motion analysis systems

**Training:**
Knowledge of spasticity is recommended

#### Availability

- Video: [https://www.scireproject.com/outcome-measures/video](https://www.scireproject.com/outcome-measures/video)

### Assessment Interpretability

<table>
<thead>
<tr>
<th>Minimal Clinically Important Difference</th>
<th>Statistical Error</th>
<th>Typical Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not established in SCI</td>
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# Measurement Properties

## Validity – Low to High

*Low* to *High* correlation between pendulum test score and average velocity for three therapists:

- Therapist A: Correlation = 0.223
- Therapist B: Correlation = 0.657
- Therapist C: Correlation = 0.67

(Smith et al. 2000; n=22, 21 male, mixed injury types, mean (SD) time since injury = 29.8 (43.2) months)

**Number of studies reporting validity data: 1**

## Reliability – High

*High* Inter-trial Reliability between seven pendulum tests:

\[
\text{ICC} = 0.92
\]

(Smith et al. 2000; n=22, 21 male, mixed injury types, mean (SD) time since injury = 29.8 (43.2) months)

**Number of studies reporting reliability data: 1**

## Responsiveness

**Floor/Ceiling Effect:**

Not established in SCI

**Effect Size:**

Not established in SCI

**Number of studies reporting responsiveness data: 0**