

# Physical Activity Recall Assessment for People with SCI (PARA-SCI)

## Assessment Overview

### Assessment Area

**ICF Domain:**

Participation

**Subscales of PARA-SCI:**

Cumulative Activity

Leisure Time Physical Activity (LTPA)

Lifestyle Activity

### You Will Need

**Length:**

20-30 minutes, 8 categories

**Scoring:**

Activity scores: average # of minutes of mild, moderate, and heavy activity reported for categories across three days.

Daily cumulative physical activity: average sum of LTPA and leisure activity across three days.

Separate scores are calculated for mild, moderate, and heavy intensity levels.

### Summary

The Physical Activity Recall Assessment for People with SCI (PARA-SCI) is designed to capture information on the type, frequency, duration and intensity of physical activity carried out by SCI individuals using a wheelchair as their primary mode of mobility.

This assessment was specifically developed for the SCI population. It provides a quantitative measure of physical activity, taking into account ADLs – which are often physically taxing for individuals with SCI.

### Availability

Available for purchase at:

<http://www.flintbox.com/public/project/1902/>

Note: A demonstration version can be downloaded for free.

## Assessment Interpretability

### Minimal Clinically Important Difference

MCD = 179.4min

(Zbogar et al. 2016, N=106; Non-ambulatory patients: (n=70), 49M, 21F, Mean age (SD): 48.9 (18.3), 49% Paraplegic, 51% Tetraplegic; Ambulatory patients: (n=36), 26M, 9F, Mean age (SD): 51.8 (15.4), 63% Paraplegic, 37% Tetraplegic)

### Statistical Error

**Standard Error of Measurement:**

Cumulative: 64.7 min/day

LTPA: 31.7 min/day

Lifestyle activity: 65.0 min/day

**Minimal Detectable Change:**

Cumulative: 179.4 min/day

LTPA: 87.9 min/day

Lifestyle activity: 180.1 min/day

(Martin Ginis et al., 2005; N=102, 72% male, mixed injury types, mean (SD) time since injury = 12.5 (11.2) years for paraplegics (n=50), 11.2 (8.5) years for tetraplegics (n=52))

### Typical Values

**Mean Scores (min/day):**

Cumulative: 184.1-189.3

LTPA: 45.3-51.2

Lifestyle activity: 138.1-138.8

(Martin Ginis et al., 2005; N=102, 72% male, mixed injury types, mean (SD) time since injury = 12.5 (11.2) years for paraplegics (n=50), 11.2 (8.5) years for tetraplegics (n=52))

## Measurement Properties

### Validity – **Low** to **Moderate**

#### **Moderate** correlation between Leisure Time Physical Activity Questionnaire for People with Spinal Cord Injury and PARA-SCI LTPA subscale:

$r = 0.46$

(Martin Ginis et al., 2012; N=103, 75% male, mixed injury types, general community, mean (SD) time since injury = 17.9 (11.9) years)

#### **Moderate** correlation with Step Counts:

$r$  (95%CI) = 0.35 (0.01-0.61)

#### **Low** correlation with Wrist accelerometry:

$r$  (95%CI) = -0.04 (-0.27-0.20)

#### **Low** correlation with SCIM III mobility score:

$r$  (95%CI) = -0.14 (-0.37-0.11)

(Zbogor et al. 2016, N=106; Non-ambulatory patients: (n=70), 49M, 21F, Mean age (SD): 48.9 (18.3), 49% Paraplegic, 51% Tetraplegic; Ambulatory patients: (n=36), 26M, 9F, Mean age (SD): 51.8 (15.4), 63% Paraplegic, 37% Tetraplegic)

**Number of studies reporting validity data: 4**

### Reliability – **Moderate** to **High**

#### **Moderate** to **High** Test-retest Reliability:

Cumulative: ICC = 0.79

LTPA: ICC = 0.72

Lifestyle Activity: ICC = 0.78

(Martin Ginis et al., 2005; N=102, 72% male, mixed injury types, mean (SD) time since injury = 12.5 (11.2) years for paraplegics (n=50), 11.2 (8.5) years for tetraplegics (n=52))

#### **Moderate** Test-retest Reliability:

Non-ambulatory participants:

$\rho$  (95%CI) = 0.68 (0.53-0.79)

Ambulatory participants:

$\rho$  (95%CI) = 0.53 (0.24-0.73)

(Zbogor et al. 2016, N=106; Non-ambulatory patients: (n=70), 49M, 21F, Mean age (SD): 48.9 (18.3), 49% Paraplegic, 51% Tetraplegic; Ambulatory patients: (n=36), 26M, 9F, Mean age (SD): 51.8 (15.4), 63% Paraplegic, 37% Tetraplegic)

**Number of studies reporting reliability data: 2**

## Responsiveness

### Floor/Ceiling Effect:

Floor Effect: 63%-64% reported no heavy intensity lifestyle activities

(Martin Ginis et al., 2005; N=102, 72% male, mixed injury types, mean (SD) time since injury = 12.5 (11.2) years for paraplegics (n=50), 11.2 (8.5) years for tetraplegics (n=52))

### Effect Size:

Not established in SCI

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