

Leisure Time Physical Activity Questionnaire for People with Spinal Cord Injury (LTPAQ-SCI)

Assessment Overview

Assessment Area

ICF Domain:
Participation

You Will Need

Length:

Less than 5 minutes
9 items/questions

Administration:

It can be self- or interviewer-administered.

Individuals are asked about:

- Number of days and minutes spent on mild-, moderate-, and vigorous-intensity aerobic LTPA.
- Number of days and minutes spent on strength-training LTPA.

Scoring:

- Total aerobic LTPA is calculated by summing the weekly mild, moderate, and vigorous intensity aerobic LTPA.
- Total strengthening LTPA equals the product of the days per week of strength training activities and the minutes per day of strength training activities minus the total time spent resting per week.

*Detailed instructions are available in the worksheet.

Summary

The Leisure Time Physical Activity Questionnaire for People with Spinal Cord Injury (LTPAQ-SCI) is an SCI-specific, self-report assessment of leisure-time physical activity (LTPA) that measures the number of minutes of mild, moderate, and heavy intensity LTPA that a person performed over the previous 7 days.

The LTPAQ-SCI uses the same PA Intensity Classification System as the PARA-SCI, but in contrast to the PARA-SCI, it exclusively measures the duration of LTPA in minutes.

A revised version has been developed recently for people with disabilities (LTPAQ-D) and, specifically for people with SCI (LTPAQ-SCI(R)). It similarly measures the number of days and minutes spent on mild-, moderate- and vigorous-intensity aerobic LTPA, but introduces one additional item to track the number of days and minutes dedicated to moderate to vigorous strength-training over the preceding seven days.

Availability

Worksheet:

- LTPAQ-SCI: Can be found in the appendix of the following article: [https://www.archives-pmr.org/article/S0003-9993\(11\)00957-9/fulltext](https://www.archives-pmr.org/article/S0003-9993(11)00957-9/fulltext)
- LTPAQ-D and LTPAQ-SCI(R): Can be found [here](#) and in [SCI Action Canada Lab](#)

Languages: English and Canadian-French.

Assessment Interpretability

Minimal Clinically Important Difference

Not established in SCI

Statistical Error

Not established in SCI

Typical Values

Not established in SCI

Validity – Moderate to High

Moderate correlation between LTPAQ-SCI Total and PARA-SCI LTPA subscale:

$r = 0.46$

(Martin Ginis et al. 2012; n=103; 75% males, tetraplegia and paraplegia, 40% complete, 60% incomplete; general community: mean (SD) time since injury: 17.9 (11.9) years)

Moderate to High correlation between min/week of moderate intensity LTPA, heavy intensity LTPA, and total LTPA and VO_{2peak} :

$r = 0.276$ to 0.443 , $p < 0.05$.

Moderate correlation between heavy-intensity LTPA and PO_{peak} :

$r = 0.294$, $p = 0.035$

(Martin Ginis et al. 2021; n=39, 29 males, 10 females; 8 tetraplegia AIS A, 7 tetraplegia AIS B, and 24 paraplegia AIS A; mean time since injury: 13 years)

All LTPA (LTPAQ-D) for combined aerobic and strength training has high correlations with:

PASIPD (MET h/day): $r = 0.613$ ($p < 0.001$)

IPAQ-SF LTPA (min/week): $r = 0.657$ ($p < 0.001$)

IPAQ-SF MVPA (min/week): $r = 0.656$ ($p < 0.001$)

PADS Exercise + LTPA (min/week): $r = 0.718$ ($p < 0.001$)

(Gee et al. 2024; n=27 who identified as having a physical and/or sensory disability; 14 males, 13 females; chronic disability; LTPAQ-D version)

All LTPA (LTPAQ-SCI(R)) for combined aerobic and strength training has high correlations with:

PASIPD (MET h/day): $r = 0.687$ ($p < 0.001$)

PARA-SCI LTPA (min/day): $r = 0.664$ ($p < 0.001$)

PARA-SCI MVPA (min/day): $r = 0.657$ ($p < 0.001$)

(Gee et al. 2025; n=23; 18 males, 5 females; tetraplegia and paraplegia; ASIA A-D; mean time since injury 17 years; LTPAQ-SCI(R) version)

Number of studies reporting validity data: 4

Reliability – Moderate to High

High Test-retest Reliability for the LTPAQ-SCI:

ICC (95% CI) = 0.83 (0.69-0.91)

(Martin Ginis et al. 2012; n=35; 77% males, tetraplegia and paraplegia, 25% complete, 75% incomplete; general community: mean (SD) time since injury: 14.2 (12.4) years)

ICCS for total LTPAQ-CF scores between T1-T2 and T1-T3 = 0.90 and 0.75 ($P \leq 0.01$), respectively.

(Cummings et al. 2019; n=37 with physical disabilities (n=7 with SCI; Canadian-French version)

Moderate Test-retest Reliability for the LTPAQ-D:

ICC = 0.751

(Gee et al. 2024; n=27 who identified as having a physical and/or sensory disability; 14 males, 13 females; chronic disability; LTPAQ-D version)

High Test-retest Reliability for the all variables measured by LTPAQ-SCI(R):

ICC = 0.85 to 1.00

(Gee et al. 2025; n=23; 18 males, 5 females; tetraplegia and paraplegia; ASIA A-D; mean time since injury 17 years; LTPAQ-SCI(R) version)

Number of studies reporting reliability data: 4

Responsiveness

Floor/Ceiling Effect:

Not established in SCI

Effect Size:

Not established in SCI

Number of studies reporting

responsiveness data: 1