



# Development of scientific exercise guidelines for adults with spinal cord injury

## 1. Systematic review

Systematic review of every published study testing effects of exercise on fitness, cardiometabolic health and/or bone health among adults with spinal cord injury (SCI).

**13,115** studies identified and screened

**211** studies relevant to the review

**189** studies of adults with chronic SCI

**22** studies of adults with acute SCI



Evidence synthesised and guideline recommendations drafted.

## 2. International panel meetings

Evidence synthesis and draft guidelines deliberated at three expert panel meetings:

- European (UK)
- Canadian (Toronto)
- International (Kelowna, BC)



Panels included scientists, clinicians, people with SCI and organisations that represent people with SCI.

## 3. Scientific guidelines

### Fitness

For **cardiorespiratory fitness and muscle strength benefits**, adults with SCI should engage in at least:

**20** minutes of moderate to vigorous intensity aerobic exercise **2** times a week

+

**3** sets of strength-training exercises for each major functioning muscle group, at a moderate to vigorous intensity

**2** times a week

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### Cardiometabolic health

For **cardiometabolic health benefits**, adults with SCI are suggested to engage in at least:

**30** minutes of moderate to vigorous intensity aerobic exercise **3** times a week

## 4. Market research

In an online survey and during workshop discussions, adults with SCI and SCI clinicians **rated the guidelines favourably** in terms of:

- **Appropriateness**
- **Utility**
- **Clarity**



## 5. Patient and public involvement

Work with **community members and stakeholders** to:

Translate scientific guidelines into **local clinical and community practice guidelines**



**Disseminate guidelines internationally**

These guidelines were developed by an international group led by Prof Kathleen Martin Ginis (University of British Columbia, Canada) and Prof Victoria Goosey-Tolfrey (Loughborough University, UK).

Processes to make the guidelines relevant to particular environments or settings must not alter the scientific integrity of the guidelines, as described in the research paper about the guidelines (available open access in Spinal Cord via [www.nature.com/articles/s41393-017-0017-3](http://www.nature.com/articles/s41393-017-0017-3)).

For more information on the guidelines in the UK please contact Prof Vicky Tolfrey (V.L.Tolfrey@lboro.ac.uk).