

Physical Activity in individuals with spinal cord injury during inpatient rehabilitation

Dominik Zbogor^{1,2}, Janice J Eng^{1,2}, William C Miller^{2,3}, Andrei V Krassioukov², Molly C Verrier⁴

¹Department of Physical Therapy, Faculty of Medicine, University of British Columbia, Vancouver Canada

²International Collaboration on Repair Discoveries, Vancouver Canada

³Department of Occupational Science & Occupational Therapy, Faculty of Medicine, University of British Columbia, Vancouver Canada

⁴Toronto Rehabilitation Institute-University Health Network, Toronto Canada; Department of Physical Therapy, Faculty of Medicine, University of Toronto, Toronto Canada

Objective: To give insight into the amount of activity, measured by objective and subjective means, which occurs during inpatient rehabilitation stay.

Design: Longitudinal observational study.

Setting: Two Canadian inpatient SCI rehabilitation centres.

Participants: The 105 patients in this investigation were 49±17 years old. Average time in rehabilitation was 96±46 days. Fifty-five patients had paraplegia and 50 tetraplegia.

Interventions: We investigated physical activity as measured by the Physical Activity Recall Assessment for People with SCI (PARA-SCI) and wrist accelerometry. The PARA-SCI categorizes intensity and time spent on activities. Patients wore wrist accelerometers on the same days the PARA-SCI was administered. Data from two weekdays near admission was averaged to obtain activity for a typical weekday. The same was done for discharge.

Main Outcome Measure: minutes of activity (PARA-SCI), and activity counts (wrist accelerometry).

Results: No significant change occurred in PARA-SCI minutes for time outside of therapy. Leisure time significantly increased from 10 to 20 minutes at admission and discharge, respectively. However accelerometry counts did increase significantly over this time (66366±53132 to 99440±81387, p=0.0001). Almost half of the patients indicated that they engaged in group classes outside of therapy, amounting to an average of 11 minutes at admission and 24 minutes at discharge.

Conclusion: Over time, patients may be doing more but feel they are working at the same intensity as recovery occurs commensurate with increasing activity. Taken with the low amount of activity that occurs outside of therapy underscores the opportunity for promoting physical activity during this time.