

**Title:** Retrospective comparison of non-traumatic and traumatic spinal cord injury in British Columbia: 2005-2010.

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**Objective:** To describe differences in demographics, neurologic, and functional outcomes following initial rehabilitation for non-traumatic spinal cord injury (NTSCI) and traumatic spinal cord injury (TSCI).

**Design:** Retrospective chart review.

**Participants:** All patients aged greater than 18 admitted to GF Strong Rehabilitation Centre for initial spinal cord injury rehabilitation between April 2005-March 2010.

**Results:** 197 NTSCI and 346 TSCI subjects were included. Mean age for NTSCI subjects was 54 years and 59% were male. For TSCI subjects, the mean age was 43 and 77% were male.

On admission to rehab, 14.6% of NTSCI patients presented with ASIA impairment scale (AIS) A, 6.1% B, 20.7% C, and 58.5% D compared to TSCI AIS A 40%, 27.4% B, 16.7% C, 28.8% D. Mean admission ASIA motor score was 75 (52-86) [median (25<sup>th</sup>-75<sup>th</sup> percentile)] and mean admission FIM motor subscale score was 47 (32-64) for the NTSCI group. Mean admission ASIA motor score was 50 (27-68) with a mean FIM motor subscale score 33 (19-50) for the TSCI group.

Upon discharge, the mean ASIA motor scores were 79 (58-90) and 50 (38-80) for NTSCI and TSCI, respectively, with FIM motor subscale scores 78 (62-85) in NTSCI and 73 (39-82) in TSCI. Mean rehabilitation length of stay was 82 days for NTSCI and 109 days for TSCI subjects.

**Conclusion:** Compared to TSCI patients, NTSCI patients are more likely to be older, female and to have less severe spinal cord injuries as measured by AIS motor scores and FIM motor subscales.

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