

Cardiovascular and metabolic complications of spinal cord injury: findings from a national population health study

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Abstract

Background. Metabolic and cardiovascular complications are a growing concern among individuals with spinal cord injury (SCI). However, studies showing or suggesting an increased prevalence of diabetes and cardiovascular diseases (CVD) among individuals with SCI are generally based on small, underpowered, and/or non-generalizable convenience samples. The objective of this study was therefore to evaluate the association between Type 2 diabetes and SCI, as well as CVD and SCI, in a large, representative sample. **Methods.** Data were obtained on 60,678 respondents to the Statistics Canada 2010 Cycle of the cross-sectional Canadian Community Health Survey (CCHS). Multivariable logistic regression, incorporating adjustment for confounders and probability weights to account for the CCHS sampling method, was conducted to quantify this association. **Results.** After adjustment for both sex and age, SCI was associated with a significant increased odds of Type 2 diabetes (Adjusted odds ratio=1.66, 95% Confidence Interval [1.16, 2.36]), a significant increased odds of heart disease (Adjusted odds ratio=2.72, 95% Confidence Interval [1.94, 3.82]), and a significant increased odds of stroke (Adjusted OR=3.72, 95% Confidence Interval [2.22, 6.23]). **Conclusion.** These heightened odds highlight the need for future cohort or case-control studies examining a causal relationship between SCI and these secondary complications, which may ultimately result in treatment and prevention strategies targeted towards individuals with SCI.