



Advancing physical activity knowledge and participation
among Canadians living with spinal cord injury.

Current heart disease tests may not predict risk accurately in people with SCI

Purpose

To determine if the tests used to predict risk of heart disease are useful for predicting heart disease in people with SCI.

Summary

- The Framingham Risk Scoring (FRS) underestimated heart disease in people with SCI.
- More C-Reactive protein (protein found in blood) in people with SCI point to risk of heart disease.

Possible Applications

- For people with SCI, heart disease risk test results (like the FRS) should be taken cautiously.
- It is important to exercise in order lower heart disease risk and stay in shape.

Research Abstract

Current coronary heart disease risk assessment tools may underestimate risk in community-dwelling persons with chronic spinal cord injury

Objectives: To quantify, in adults with chronic spinal cord injury (SCI): (1) presence of metabolic syndrome versus the general North American population (GP) and (2) 10-year coronary heart disease (CHD) risk using Framingham risk scoring (FRS).

Methods: Fasting anthropometric and biochemical data were collected from 75 adults with chronic SCI. Metabolic syndrome was determined using four internationally recognized definitions and FRS using the most recent (2001) algorithm.

Results: Prevalence of metabolic syndrome was up to 5.4 times lower in SCI participants compared to GP, and FRS categorized 3.1% of participants as being at high 10-year CHD risk. However, high-sensitivity C-reactive protein (CRP) values indicated 36.7% of participants as being at high CHD risk.

Conclusion: Current metabolic syndrome definitions and FRS may underestimate true CHD risk in people with SCI. Tools that better identify CHD risk require validation in the SCI population. CRP may be a potential factor to consider in the development of SCI-specific screening tools.

Finnie AK, Buchholz AC, Martin Ginis KA, & The SHAPE-SCI Research Group (2008). Current coronary heart disease risk assessment tools may underestimate risk in community-dwelling persons with chronic spinal cord injury, *Spinal Cord*, 46, 608-615.