



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.**