

Abstract Title

Iron sufficiency of Canadians: 2012-2013

J. Randall Simpson¹, Erika Gibson¹, Laura Elliott¹, Colleen Farrell¹, Michelle Edwards¹, Marcia Cooper².

¹University of Guelph, Guelph, ON, ²Health Canada, Ottawa, ON

Abstract

Introduction: Based on data from Cycle 2 (2009-2011) of the Canadian Health Measures Survey (CHMS), 97% of Canadians 3-79y had sufficient hemoglobin concentrations [Hb]. Serum ferritin [SF] sufficiency for women aged 12-19y and 20-49y were lower at 87% and 91%, respectively. In view of changing dietary patterns, it is important to monitor iron status on an ongoing basis.

Objectives: To determine iron sufficiency of Canadians (3-79y) from CHMS Cycle 3 (2012-2013) and its relationship with selected demographic and dietary variables.

Methods: CHMS Cycle 3 data from 5760 participants, representing 96% of Canadians, were analyzed using SPSS. CHMS survey weights were applied; data for pregnant women and individuals with abnormally high laboratory values were excluded. World Health Organization reference values for age and gender were used to estimate iron sufficiency based on [Hb], [SF], and other markers.

Results: 95% of Canadians had [Hb] at or above age group and gender references. Of the 5% who were anemic, 61% had [SF] greater than reference values. The lowest [Hb] sufficiency (89%) was for females aged 20-64y. Overall, 94% of Canadians had sufficient [SF] with 78% and 85% for women 12-19y and 20-49y, respectively. [Hb] and [SF] were significantly lower for those with low incomes and for those who reported good/fair/poor vs excellent/very good health. For women, [Hb] and [SF] were significantly higher for those consuming red meat, pasta and green leafy salads 1-3 times/wk compared to those consuming these foods 4 times/wk.

Discussion: The proportion of young women (12-19y) with sufficient [SF] dropped from 87% in Cycle 2 to 78% in Cycle 3. This is of concern given that it is crucial that women of child-bearing age have sufficient iron stores for pregnancy.

Relevance: These results suggest that consumption of iron-rich foods should be emphasized, particularly for women of child-bearing age.