

Young adults with a family history of cardio-metabolic disease have persisting and worsening health behaviours

Berhe Sahle¹, Tan Bui¹, Costan Magnussen¹, Varity Cleland¹, Terry Dwyer^{1,2}, Alison Venn¹ and Seana Gall¹

1 Menzies Institute For Medical Research, Hobart, Australia;

2 George Institute, University of Oxford, Oxford, UK, Oxford, UK

Background: A family history cardio-metabolic disease is considered a risk factors for stroke and cardiovascular diseases. However, the reasons for the link between family history of these diseases and events remains uncertain. We hypothesized that family history of cardio-metabolic diseases would be related to poor health behaviors.

Methods: Participants of the Childhood Determinants of Adult Health study were 26–36 years at baseline (2004–06) and 31–41 years at follow-up (2009–11). At baseline, they reported family history of cardio-metabolic disease prior to the age of 50 in first-degree relative. Changes in health behaviors (healthy BMI, non-smoking, low alcohol, top quartile of a dietary guideline index, and physical activity) between baseline and follow-up were classified (remained healthy, became healthy, became unhealthy, and remained unhealthy). Sex-specific log-multinomial regression models estimated the relative risks (RR) and 95% confidence interval (CI) of change in health behavior by family history of disease.

Results: Family history of cardio-metabolic disease was present in 12% (93/923) of men and 14% (184/1320) of women. In men, those with a family history were more likely to reduce their physical activity level (RR: 2.62, 95% CI: 1.48–4.60) or persist at an unhealthy level (RR: 1.28, 95% CI: 1.00–1.62), remain an unhealthy weight (RR: 1.27, 95% CI: 1.04–1.47), and remain a smoker (RR: 1.60, 95% CI: 1.11–2.31). There were no associations for women.

Conclusion: Interventions targeting younger men with a family history of cardio-metabolic disease presents an opportunity to reduce the burden of stroke and other cardiovascular diseases in later life.