

Program helps at-risk family members of patients with heart disease improve their own heart health

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Family members of patients with heart disease adopted healthier lifestyles and decreased their risk of a cardiovascular event after participating in a program to improve heart health, according to a clinical trial published in *CMAJ* (*Canadian Medical Association Journal*).

Family members of patients with coronary [heart disease](#) have a higher risk of cardiovascular disease, with behavioural factors such as poor diet, lack of exercise and tobacco use playing a role in addition to genetic factors.

A year-long family heart-health study involving 426 siblings, children and spouses of patients hospitalized for an acute coronary event looked at the impact of a specialized intervention program on cholesterol levels, [physical activity](#), fruit and vegetable consumption and other outcomes. The clinical trial randomized 211 [family members](#) to an intervention group, which received 17 counselling sessions with a trained health educator, goal setting and feedback. Detailed reports on health status and recommendations were also sent to the patients' primary doctor. By contrast, the 215 family members in the control group received only printed materials on smoking cessation, healthy eating, physical activity and weight management.

People in the intervention group became more physically active, engaging in an additional 66 minutes of weekly physical activity at the

3-month mark compared with controls. By the 12-month mark, they were performing 24 extra minutes of activity—less than at 3 months but more than at the start of the trial. Family members in the intervention group added more fruit and vegetables to their diets; body mass index and waist circumference were also reduced. However, there appeared to be no effect on the ratio of total cholesterol to high-density lipoprotein cholesterol.

"The effects of the heart-health intervention in motivating and enabling behaviour changes are impressive and clinically important," writes Dr. Robert Reid, Ottawa Heart Institute, Ottawa, Ontario, Canada, with coauthors. "Self-reported changes in physical activity, dietary patterns and smoking cessation were corroborated by improvements in objective measures such as [body mass index](#), [waist circumference](#) and expired carbon monoxide."

More people in the [intervention group](#) than in the control group stopped smoking after 1 year (6 v. 1 respectively).

The authors suggest that the components of the program—goal-setting, self-monitoring, frequent contact with health educators, feedback and other elements—were motivators for behavioural change compared with more passive approaches, such as generic handouts used by many physicians in practice.

Lessons learned:

- Family members were interested to learn about their personal risk of heart disease and how to decrease risk.
- Hearing their risk level prompted many participants to change behaviours.
- Participants were motivated and willing to have frequent contact with health educators over the telephone.

"High participant engagement and a reasonable cost per participant (\$240) suggest that the intervention is feasible in nontrial settings," write the authors.

More information: www.cmaj.ca/lookup/doi/10.1503/cmaj.130550

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