

Project

Effects of long-term consumption of dairy products on satiety, body weight and glycemic control



Principal Investigator:

Harvey Anderson (University of Toronto)

Co-Investigator:

Bohdan Luhovyy (Mount Saint Vincent University)

Collaborator:

John Sievenpiper (University of Toronto)

National Dairy Research Strategy investment priority targeted:

- Role of dairy products, especially full-fat, and specific dairy food matrices (milk, yogurt and cheese), on cardiometabolic health and healthy aging, including:
 - Prevention of type 2 diabetes, metabolic syndrome, hypertension, cardiovascular disease
 - Weight and body composition, satiety
 - Risk factors: blood lipids, blood pressure, glycemic control, inflammatory markers

DURATION: 2019-2023

TOTAL BUDGET: \$1,245,133

Why this research is important:

Obesity and type 2 diabetes are global epidemics and prevalent in Canada. A growing body of research has shown that dairy products may reduce the risk of weight gain and obesity as well as type 2 diabetes. However, this research is limited and with regards to weight gain and obesity, it is mainly in the form of prospective cohort studies (i.e. studies that follow a group of people over time to determine how certain factors affect them for the outcomes being measured). Multiple short-term randomized controlled trials were completed in the Dairy Research Cluster 2 examining appetite, food intake and postprandial blood glucose following full-fat dairy (milk, yogurt, cheese) consumption. These studies provided proof of principle of the potential benefit of long-term habitual consumption of full-fat dairy to support health claims for the control of appetite (i.e. satiety) and postprandial blood glucose. This new project will extend the scientific research in the form of randomized controlled trials (RCTs), which can prove "cause and effect" relationships, over a longer period of time, to provide high level evidence for developing dietary guidelines and policies.



Research objective:

Determine the impact of the consumption of dairy products on satiety (appetite control), postprandial glycemia (blood glucose control) and weight management, all key factors related to the development of obesity and type 2 diabetes.

Project overview:

A large, multi-centre randomized controlled trial (RCT) will compare three diets. The first diet will be a low-dairy, energy-restricted diet. The second diet will be an energy-restricted diet with three servings per day of dairy (regular-fat cheese, yogurt and milk). The third diet will consist of three servings per day of regular-fat dairy without energy restriction. The study will look at weight and body composition as well as blood pressure and blood lipids such as cholesterol and other risk factors. The study will also measure satiety (i.e. appetite control) and blood glucose control after a meal (i.e. postprandial glycemia). A total of 153 men and women aged 19-45 years old will participate in the study for 24 weeks.

Expected outcomes:

This project will contribute strong evidence with regards to the impact of consuming dairy products on satiety, postprandial glycemia and weight management by showing their unique function in curbing appetite and control of body weight and blood glucose. The data may support health claims related to the beneficial effects of consumption of dairy products (milk, yogurt and cheese) on these factors and the potential to increase demand for dairy products.

FUNDING PARTNERS:

CANADIAN
AGRICULTURAL
PARTNERSHIP



Canada

NOTE: As per the research agreement, aside from providing financial support, the funding partners have no decision-making role in the design and conduct of the studies, data collection and analysis or interpretation of the data. Researchers maintain independence in conducting their studies, own their data, and report the outcomes regardless of the results. The decision to publish the findings rests solely with the researchers.