## Anthony Hanley, PhD

Dr. Hanley received his PhD in epidemiology from the University of Toronto in 2000, and was subsequently a post-doctoral fellow in the Division of Clinical Epidemiology, University of Texas Health Sciences Centre at San Antonio. From 2002-2005 he was a research scientist in the Leadership Sinai Centre for Diabetes at Mount Sinai Hospital. Since 2005 he has been a faculty member of the Department of Nutritional Sciences, University of Toronto, where he is currently an associate professor and holds a Tier II Canada Research Chair in Diabetes Epidemiology.

Dr. Hanley's research interests include the metabolic and nutritional epidemiology of obesity, insulin resistance and type 2 diabetes, with a particular focus on diabetes in Aboriginal Canadian communities and other high-risk populations.

## Dietary patterns rich in dairy in diabetes prevention

An increasing body of scientific evidence, including several recent meta-analyses of prospective cohort studies, has documented inverse associations of dairy consumption with risk of type 2 diabetes mellitus (T2DM). Further, specific dietary patterns containing higher amounts of dairy (including DASH) have also been reported to be inversely associated with T2DM. While the precise mechanisms through which dairy intake may reduce T2DM risk are not known, dairy products contain a number of components that may impact one or more of the key underling pathophysiological disorders of T2DM. These components include calcium and vitamin D (which have been positively associated with insulin sensitivity and beta cell function), whey protein (which is thought to improve glycemic control), and individual dairy-associated fatty acids, including 15:0, trans 16:1n-7, and c9,t11 conjugated linoleic acid. These fatty acids may simply represent reliable biomarkers of dairy intake, or alternatively, one or more may have bioactivity relevant to diabetes pathogenesis. This presentation will provide an overview of current research on dairy, its components and risk of T2DM.

**Learning objectives:**

1. Recent epidemiological literature on the association of dairy products with risk of type 2 diabetes;
2. The nutritional components of dairy products and their impact on the underlying pathophysiological disorders of type 2 diabetes;
3. Emerging literature on fatty acids that are specific to dairy, their potential mechanisms in the context of type 2 diabetes, and their possible utility as biomarkers of dairy intake;