

# Prediabetes, CANRISK and screening in Canada

---

**David Butler-Jones, MD, Chief Public Health Officer, Public Health Agency of Canada**

---

Occurring as a result of both lifestyle and genetic factors, type 2 diabetes is a serious chronic disease that can give rise to complications including blindness, heart disease and kidney failure. About 2 million Canadians have been diagnosed with type 2 diabetes, but an estimated 400 000 who have the disease have not yet been diagnosed. A further estimated five million more have prediabetes, where blood sugar levels are elevated, but not high enough for a diabetes diagnosis. Diabetes often remains undetected for years before clinical diagnosis, and many newly diagnosed persons already exhibit signs of diabetic complications. The age-standardized prevalence of diagnosed diabetes has been climbing by an average of 7 percent per year over the past decade. While many lifestyle risk factors for diabetes are modifiable, for example, by increasing physical activity or losing excess weight, genetic factors such as family history and ethnicity cannot be changed. Yet even “non-modifiable” factors are important, since they interact with other risk factors to affect one’s overall diabetes risk. Risk

assessment tries to weigh the combined effect of all possible risk factors, not only the obvious ones like obesity, gender and age.

Risk assessment tools can help effectively and efficiently identify people at high risk who merit more conclusive diagnostic testing for diabetes and prediabetes. When coupled with proven lifestyle interventions, identifying those with prediabetes may help delay or even prevent disease progression to type 2 diabetes, while the early identification of those with diabetes may postpone or even avoid serious diabetes complications through timely clinical care.

In this issue of *Chronic Diseases and Injuries in Canada*, three papers examine the theme of identifying people at high risk of diabetes and prediabetes using a new risk tool, CANRISK. Talbot and Dunbar invited participants in two rural Nova Scotia communities to self-administer the CANRISK questionnaire and take an oral glucose tolerance test, and then, if prediabetic, to take part in a Prediabetes Lifestyle Program. In Vancouver, Papineau

and Fong involved participants from East Asian, South Asian, Latin American and sub-Saharan African ethnic groups, as well as Caucasian and urban Aboriginal people. Robinson and colleagues provide evidence that CANRISK is a valid tool for assessing diabetes risk on a national scale for Canada’s multi-ethnic population.

The papers in this issue clearly demonstrate that targeting those at risk of diabetes and prediabetes is both an essential and collaborative effort. These new developments, however, aren’t going to solve all our challenges. Encouraging the effective uptake of new tools like CANRISK is not the exclusive responsibility of the health care system or governments in general, nor is it the responsibility of those target groups at greatest risk. Rather, targeted prevention strategies are society-wide opportunities that call for all of us to share, promote and enable healthier lifestyles and enhanced prevention efforts. Let’s ensure it’s a *collective* effort.