



Diabetes in Canada: Children, youth and First Nations

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This article is the second in a series of three about diabetes in Canada. Some two million

Canadians live with diabetes and there is an increasing prevalence among We look at the prevalence of diabetes in children and youth, and among First Nations. Next issue we wrap up with a look at how to reduce the risk of type 2 diabetes.

Children with diabetes face most of the same challenges as their adult counterparts, but they must manage the disease and its risks over their entire lives.

The main form of diabetes among children and youth is type 1 which is characterized by the presence of autoimmunity against insulin producing cells. However, type 2 diabetes, historically viewed as an adult disease, has been on the rise globally in children and youth for the last twenty years. It is estimated that 90% of cases in this group were type 1 diabetes.

As rates of obesity increase, type 2 diabetes also increases, typically between the ages of 10 and 19 years.

The risk factors for type 2 diabetes among children and youth are much the same as for adults. Obesity is a key factor: in the last 25 years, rates of obesity in children and youth have been increasing rapidly throughout the world. The emergence of type 2 diabetes in children and youth has occurred concurrently with the rise in rates of childhood obesity. Family history is also a factor as children and youth with a family history of type 2 diabetes show reductions in insulin sensitivity at a younger age than children with no family history.

Children from some ethnic groups (First Nations, African/Caribbean, Hispanic, and South Asian) are also

at higher risk of earlier onset of type 2 diabetes. Three quarters of Canadian children with type 2 diabetes belong to a high-risk ethnic group.

And a unique risk factor is the onset of puberty as young people aged 13 to 17 going through puberty appear to be more vulnerable to developing type 2 diabetes.

Canada's aboriginal populations are over-represented among people with diabetes. Prior to 1940 diabetes was rare among Aboriginal (First Nations, Métis and Inuit) in North America but rates increased rapidly after 1950 and are now at epidemic levels for some communities. Not only are there more cases of diabetes including among children and youth, but the earlier age of onset and high rates of complications amplify the problem.

The most recent national data show that the highest rate of diagnosis is among First Nations individuals living

on-reserve. After adjusting for difference in age structure, the prevalence of diabetes was 17.2% among First Nations individuals living on

reserve, 10.3% among First Nations individuals living off-reserve, and 7.3% among Métis. Among non-Aboriginal Canadians, the prevalence is 5.0%.

As with other Canadians, lifestyle factors such as diet, physical inactivity, overweight and obesity, and smoking are all key risk factors for type 2 diabetes in First Nations, Inuit and Métis populations.

However we define the group facing diabetes, the impacts of both type 1 and type 2 go far beyond the management of the disease itself. Complications may lead to disability or lower quality of life. In our next article, we discuss strategies for reducing the risks of type 2 diabetes.

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