THE ISSUE

In a 1937 survey, there wasn’t a single case of diabetes among Saskatchewan’s aboriginal population.

By 2006, one in five individuals had been diagnosed, and the prevalence continues to rise.

Though diabetes rates are increasing among all Canadians, researchers have long speculated that Aboriginal Peoples are genetically programmed to use calories sparingly, exposing them to obesity, diabetes and all the health complications that go with it.
THE STUDY

Funded by the Canadian Institutes of Health Research, Health Canada, the Saskatoon Health Region and the Royal University Hospital Foundation, a team led by Roland Dyck, a medical doctor and professor at the U of S department of medicine, has been researching the rise of diabetes among indigenous peoples for 20 years. The results of a recent ground-breaking study were published by the Canadian Medical Association Journal in February 2010.

“The study looked at more than 90,000 people with diabetes in Saskatchewan since 1980 and gives the clearest picture to date of the demographic differences between First Nations and non-First Nations people across Canada,” says Dyck.

THE FINDINGS

The first thing the study does is debunk that long-held notion of genetics.

“It’s clear that the rapid appearance of Type 2 diabetes, particularly among First Nations populations, is due to environmental rather than genetic factors,” he says.

Indeed, the epidemic is linked to rising rates of obesity, which in turn is associated with the loss of traditional lifestyles.

The study also paints a distressing picture of how hard the disease has hit aboriginal communities. First Nations women aged 20 to 50 experienced the heaviest burden of diabetes, and by age 60 nearly 50 per cent had been diagnosed. Overall and compared to their non-First Nations counterparts, diabetes rates were four times higher among First Nations women and 2.5 times higher among First Nations men.

Because diabetes strikes aboriginal women hardest during their reproductive years, women and their children are caught in an accelerating spiral. Higher rates of obesity lead to more diabetic pregnancies, which can lead to Type 2 diabetes in mother and child, and so on in future generations. Indeed, Dyck and computer scientist Nathaniel Osgood recently showed that gestational diabetes could be at the heart of 40 per cent of the epidemic among First Nations people.

THE IMPACT

“Diabetes is arguably the most important chronic health issue among First Nations people and we’ve identified a key mechanism behind it,” said Dyck.

Prevention of gestational diabetes could reduce the risk for Type 2 diabetes in both affected women and their unborn children. This knowledge provides great potential for developing innovative initiatives in First Nations communities.

Both Health Canada’s First Nations and Inuit Health Branch and its associated Aboriginal Diabetes Initiative, which reaches more than 600 communities across Canada, have approached Dyck to explore ways of using his findings to provide more effective programs and services for diabetes prevention.

For more information, visit: http://www.usask.ca/research/news/read.php?id=911

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