

# Diabetes Care in Nova Scotia

*a newsletter of the Diabetes Care Program of Nova Scotia*

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## State of the Art

### PREVENTING TYPE 2 DIABETES IN FAMILIES AT RISK

*"For every year that a person can live free of diabetes means an added year free of pain, disability, and medical costs incurred by this disease."<sup>1</sup>*

*"Why is it that all this information about preventing type 2 diabetes comes after I get it?  
Where was it before?"<sup>2</sup>*

Next month we will launch an initiative aimed at preventing type 2 diabetes in families at risk. Some might ask why when we can barely cope with the increasing numbers of people diagnosed with this condition and the growing reality of its life altering complications. These are precisely the reasons. Not only is the system stressed, so are the individuals coping with this condition. The demands to tightly manage all metabolic aspects of diabetes (blood pressure, blood lipids, and blood glucose) place phenomenal pressures on the person with diabetes as well as his/her caregivers, health care providers, and the health system. Not only is cost an issue (personally and system-wide) but

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so is quality of life. Wouldn't it be great to successfully delay or prevent the development of just one case of diabetes? Think of a family that you know where type 2 diabetes is already present. Now picture this person's children. Can we play a role in altering the future of these children?

Increasingly, the evidence points to the indisputable value of lifestyle intervention. First the Finnish Diabetes Prevention Study (DPS), and then the American Diabetes Prevention Program (DPP), had shown that physical activity and healthy eating leading to modest weight loss had an impact. In fact, both studies were able to reduce the risk of developing type 2 diabetes by up to 58% in high-risk individuals (those with impaired glucose tolerance [IGT]).<sup>3,4</sup> The news was even better for those > age 60, where there was a risk reduction of up to 71%.<sup>4</sup> In the DPP, pharmacological intervention with Metformin was also shown to have a benefit (31%), but not as great as that of lifestyle intervention.<sup>4</sup>

Can we apply these findings to other at-risk groups? No question! Similar beneficial results have been found in overweight individuals with a family history of diabetes where a modest weight loss of 4.5 kg over two years was sufficient to reduce the risk by ~ 30%.<sup>5</sup>

*What we know...*

- The prevalence of diagnosed diabetes in the US increased 33% between 1990 and 1998. This was seen across all ages, races, education levels, and weight levels.<sup>6</sup>
- The progression to type 2 diabetes is thought to take years. IGT and impaired fasting glucose (IFG) are identifiable categories of the "pre-diabetes state." These conditions as part of the metabolic syndrome are estimated to be present in up to 20% of the adult population and even greater (up to 30%) in specific populations (First Nations, Hispanic, and others).<sup>7</sup>
- The prevalence of obesity has increased dramatically in the past 20 years. Thirty-eight percent (38%) of Nova Scotia (NS) adults

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The first week of January, April, July, and October. Questions or contributions should be submitted at least 3 to 4 weeks prior to the publication date.

have unhealthy weights being classified as overweight or obese (BMI > 27).<sup>8</sup>

- Obesity in Canadian children has more than doubled since the early eighties.<sup>9</sup>
- Fifty-seven percent (57%) of the NS population is not active enough to receive optimal health benefits.<sup>10</sup>
- The in-utero environment of women with inadequately controlled gestational diabetes mellitus (GDM) increases the offspring's risk of obesity and type 2 diabetes.<sup>11</sup>
- More active individuals and individuals with lower BMIs have a lower incidence of diabetes and other chronic diseases.<sup>12</sup>

#### Who will we target?

As the development of type 2 diabetes is directly linked to the independent risk factors of physical inactivity, excess body weight, and unhealthy food choices, we will be targeting families with a known risk of developing diabetes. These include those with a confirmed diagnosis of type 2 diabetes (parent, grandparent, or sibling), those individuals with a diagnosis of IFG or IGT, women with a previous diagnosis of GDM as well as their offspring.

#### What will the initiative look like?

We will release an information flyer aimed at families / individuals at risk. Emphasis has been placed on letting people know that type 2 diabetes can be prevented. Tips are provided for moving to "action" at the individual and community level. Walking for health and walking groups are promoted with linkage to recreation departments and Nova Scotia's walking trails. Grocery store tours and services are highlighted as ways to help increase the intake of healthy foods. The importance of modest, manageable weight loss in those that are overweight by increasing physical activity and making healthy food choices is the overriding theme. This colorful information piece will be accompanied by "coaching material" for the health care provider. This coaching material will frame the intended use of the material and provide supporting facts and figures with cited references. As we plan to launch in November (Diabetes Month), information sessions held at the community level will promote these consistent messages.

#### Who are our partners?

The DCPNS is pleased to have partnered with a wide range of organizations and individuals in taking this initiative from concept to reality. We have really been able to see the strength in numbers. Partners include Nova Scotia Diabetes Centres, Canadian Diabetes Association, Medical Society of Nova Scotia, VON, Pharmacy Association of Nova Scotia (PANS), ICONS, Unit for Population Health and Chronic Disease Prevention (Dalhousie University), the Diabetes Community Consultants for the Aboriginal Diabetes Initiative in Atlantic Canada, Nova Scotia Sport

and Recreation Commission, as well as private industry. We also would like to thank and recognize the feedback provided by persons with diabetes in the piloting of the educational material.

Look for copies of the handout—*Can I catch diabetes? No, but it could catch you!*

Remember, diabetes is not inevitable! We need to heighten awareness and build supports at the community level. We need to help people move to action for prevention of diabetes to be possible.\*

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#### References:

1. Quote: Director of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). ClinicalTrials.gov. Diabetes Prevention Program; Aug. 2001.
2. Quote: Consumer comment during review of DCPNS draft prevention materials. Sept., 2002.
3. Tuomilehto J, Lindstorm J, Eriksson JG, et al. Prevention of type 2 diabetes mellitus by changes in lifestyle among subjects with impaired glucose tolerance. *N Engl J Med.* 2001;344(18):1343-1350.
4. The Diabetes Prevention Program Research Group. Reduction of the incidence of type 2 diabetes with lifestyle intervention or metformin. *N Engl J Med.* 2002;346(6):393-403.
5. Wing RR, Venditti E, Jakicic JM, Polley BA, Lang W. Lifestyle intervention in Overweight individuals with a family history of diabetes. *Diabetes Care.* 1998;21(3):350-359.
6. Mokdad AH, Ford ES, Bowman BA, et al. Diabetes trends in the US: 1990-1998. *Diabetes Care.* 2000;23:1278-1283.
7. Ford ES, Giles WH, Dietz WH. Prevalence of the metabolic syndrom among US adults. *JAMA.* 2002;287(3):356-359.
8. Nova Scotia Department of Health and Heart Health Nova Scotia. *The Nova Scotia Health Survey.* Halifax, NS: Author; 1995.
9. Tremblay MS, Katzmarzyk PT, Willms JD. Temporal trends in overweight and obesity in Canada, 1981-1996. *Int J Obes Relat Metab Disord.* 2002;26(4):538-543.
10. Canadian Fitness and Lifestyle Research Institute, 1999. [www.cflri/pa/surveys](http://www.cflri/pa/surveys).
11. Sylverman BL, Metzger BE, Cho CH, Loeb CA. Impaired glucose tolerance in adolescent offspring of diabetes mothers: relationship to fetal hyperinsulinism. *Diabetes Care.* 1995;18:611-617.
12. Rippe JM, Hess S. The role of physical activity in the prevention and management of obesity. *JADA.* 1998;98(10) Suppl 2:S31-S38.