

Diabetes

Canadian Physiotherapists recognize that diabetes is a serious, worldwide problem. In 2007, the United Nations General Assembly passed a resolution recognizing November 14th as World Diabetes Day, and encouraged all member states to develop national strategies and policies for the prevention, treatment and care of people with diabetes.

The impact of diabetes is felt significantly in Canada, where 1.8 million adult Canadians had diagnosed diabetes in 2005. This number has grown 70% since 1998, and continues to grow given Canada's demographic trends. An aging population, increasing immigration from high-risk populations and growth in the aboriginal population will increase the burden of diabetes over the next 10 years.

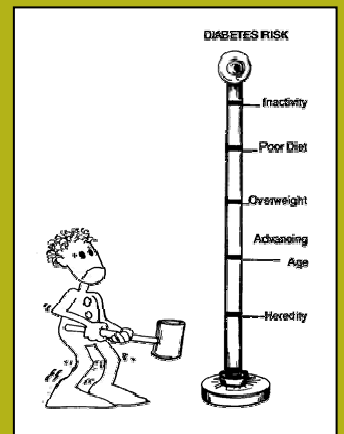
Researchers project an increase of diagnosed diabetes in Canada to 2.4 million by the year 2016

While individuals are often diagnosed with type 1 diabetes at an early age, type 2 diabetes occurs later in life, and may go undiagnosed for several years. Markers of risk for type 2 diabetes include:

- age greater than 40 years
- increased body mass index and waist circumference
- elevated blood pressure
- dyslipidemia and elevated levels of blood glucose

Early, multidisciplinary intervention for individuals with risk factors for type 2 diabetes can in turn lessen the incidence of secondary conditions such as:

- heart disease
- stroke
- kidney failure
- peripheral neuropathy



Prevention of type 1 diabetes has not yet been successful. However, physiotherapists are positioned to play an integral role in the prevention or delay of onset for type 2 diabetes. Thirty to sixty percent of type 2 diabetes may be prevented through early lifestyle or medication intervention. An important component of this multidisciplinary approach is improved levels of physical activity.

Sadly, current Canadian trends reflect a high level of physical inactivity and a high incidence of obesity. In 2005, 2 of 3 Canadian adults and nearly 1 of 3 children aged 12 to 17 years were overweight or obese, and are therefore at high risk of developing type 2 diabetes. However, research indicates that people at risk of developing type 2 diabetes were able to cut their risk by 58% with moderate physical activity (30 minutes a day) and weight loss (5 to 7% of body weight). For people over age 60, the risk was cut by almost 71%.

To this end, evidence-based management strategies for both type 1 and type 2 diabetes should include supervised exercise in the form of both cardiovascular and resistance training.

A registered physiotherapist can participate in the multidisciplinary management of diabetes by:

- assessing body mass index and anthropometric measures to develop and monitor weight management goals
- evaluating cardiovascular fitness, muscular strength and muscular endurance
- developing an exercise program that incorporates resistance training and cardiovascular exercise, specific to individual needs and abilities
- providing instruction and supervision for safe participation in an exercise program
- developing and monitoring an independent home program of exercise

References:

Can J. Diabetes 2008; 32(suppl1) S1-201

For further information about a physiotherapist-supervised exercise program for weight control, and the prevention and management of diabetes, please contact

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