

# News from SickKids®

For immediate release

## **New study to test oral insulin in the prevention of diabetes**

TORONTO (October 16, 2007) – Researchers at The Hospital for Sick Children (SickKids) are leading the Canadian component of a multinational clinical study aimed at preventing or delaying type 1 diabetes. The Type 1 Diabetes TrialNet study will examine whether taking insulin orally can prevent or delay diabetes in people who are at risk for the disease.

“People who have a first- or second-degree relative with type 1 diabetes have approximately a 15 times greater risk of developing the disease than the general population,” says Dr. Diane Wherrett, staff endocrinologist at SickKids and the lead Canadian investigator for the Type 1 Diabetes TrialNet study for oral insulin. “Our goal is to determine whether taking oral insulin can help prevent type 1 diabetes or delay it, even for a few years, allowing those at risk a chance to avoid the challenges of controlling glucose levels and other serious health complications.”

Type 1 diabetes, usually diagnosed in children, is due to abnormal autoimmunity that destroys insulin producing cells in the pancreas. Insulin is an essential hormone that allows the body’s cells to use sugar for energy. Approximately 200,000 Canadians have type I diabetes and require daily insulin injections. Type 1 diabetes hardens small blood vessels and is the leading cause of blindness, kidney failure, stroke and loss of limbs.

In this study, researchers will test whether an insulin capsule taken by mouth once a day can prevent or delay diabetes in a specific group of people at risk for type 1 diabetes. Some scientists believe that introducing insulin via the digestive track induces tolerance or a quieting of the immune system’s destruction of cells that produce insulin. In a previous diabetes prevention trial using oral insulin, a sub-group showed a delay in the onset of type 1 diabetes.

Approximately 20,000 people per year worldwide who have first- and second-degree relatives with type 1 diabetes will be recruited for the oral insulin study over the next five years. Individuals who are between the ages of three and 45 and have a first-degree blood relative (child, parent or sibling) or individuals who are between the ages of three and 20 and have a second-degree blood relative (uncle, aunt, niece, nephew, cousin or grandparent) with type 1 diabetes may be eligible for screening to determine their risk of

developing this disease. The initial screening involves a single blood test to look for autoantibodies that may present long before the onset of diabetes. To enroll in the study or for more information, Canadians can call 416-813-5858 or 1-866-699-1899 or [www.diabetestrialnet.org](http://www.diabetestrialnet.org).

The national study is led by SickKids, who will coordinate the trial with 10 other centres across Canada: Calgary, Edmonton, Vancouver, Winnipeg, Saint John, St. John's, Halifax, Hamilton, London and Montreal.

More than 100 centres across Canada, the United States, Europe and Australia will be involved in the study. This study is conducted by Type 1 Diabetes TrialNet, a National Institutes of Health (NIH) funded network of researchers dedicated to the understanding, prevention and early treatment of type 1 diabetes. The Type 1 Diabetes TrialNet studies are funded by the National Institute of Diabetes and Digestive and Kidney Diseases, the National Institute of Child Health and Human Development, and the National Institute of Allergy and Infectious Diseases within the NIH. The Juvenile Diabetes Research Foundation International and the American Diabetes Association also support this initiative.

The Hospital for Sick Children (SickKids), affiliated with the University of Toronto, is Canada's most research-intensive hospital and the largest centre dedicated to improving children's health in the country. As innovators in child health, SickKids improves the health of children by integrating care, research and teaching. Our mission is to provide the best in complex and specialized care by creating scientific and clinical advancements, sharing our knowledge and expertise and championing the development of an accessible, comprehensive and sustainable child health system. For more information, please visit [www.sickkids.ca](http://www.sickkids.ca). *SickKids is committed to healthier children for a better world.*

**Please note:** The next scheduled screening in Toronto will be held on November 21 from 4 to 8 pm. SickKids will also be holding screening sessions in the Greater Toronto Area, as well as in Barrie, Kitchener, Orangeville, Oshawa and Peterborough. Participants must call in advance to book an appointment for a screening at 416-813-5858 or 1-866-699-1899.

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