

## PROJECT FACT SHEET

# Solving the Problem of Insulin Absorption in Adolescents with Type One Diabetes

Investigator: Elizabeth A. Cummings  
Pediatric Endocrinologist  
IWK Health Centre, and Associate Professor Pediatrics  
Dalhousie University

Type one, or juvenile, diabetes is one of the most common chronic diseases of childhood. Children with diabetes manage the condition with 3-4 insulin injections a day or an insulin pump and a careful attention to diet and exercise to keep the blood sugar regular.

When these children enter adolescence, the problem of how to manage blood sugar becomes more complicated. This is the time when it is hardest for children to follow prescribed behaviors and a time when their bodies are more resistant to insulin injections (due to competing hormones of puberty). Unfortunately, this is also the time when the process that leads to diabetes complications like blindness and kidney failure can begin.

Elizabeth Cummings, a pediatric endocrinologist at the IWK Health Centre, and associate professor of pediatrics at Dalhousie University, is looking for ways to make it easier for teens to control their blood sugar. Recently, with the help of NSHRF and Toronto's Sick Kids Hospital (they now call themselves Sick Kids), tested the medication pioglitazone (marketed *(and Canada)* as Actos) to see if it would help regulate blood sugar in a randomly selected group of 35 teenagers.

"We found that the medication did not have an effect on blood sugar, although we may have to test more widely to confirm this finding," says Dr. Cummings. She notes that the blood collected for this study may now be used to assess the impact of the drug on incidences of cardiovascular risk.

"Discovering that this medication doesn't help is a significant finding" says Dr. Cummings. "Clearly this medication should not be administered to teenagers with diabetes at this time."

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Contact information:

Elizabeth A. Cummings  
Pediatric Endocrinologist  
IWK Health Centre, and  
Associate Professor Pediatrics  
Dalhousie University  
Phone: (902) 470-6955  
Email: [Elizabeth.cummings@dal.ca](mailto:Elizabeth.cummings@dal.ca)