

**Written Submission from JDRF CANADA  
to the Pre-Budget Consultations in  
Advance of Budget 2021**

### **Recommendation #1**

The Government of Canada should honour next year's centenary of the discovery of insulin through a renewed investment of \$15M in the *JDRF-CIHR Partnership to Diabetes* to be matched by JDRF and its partners.

### **Recommendation #2**

As recommended in the [Disability Advisory Committee's \(DAC\) First Annual Report](#), Canadians requiring life-sustaining therapy, including insulin therapy, should automatically qualify for the Disability Tax Credit (DTC).

### **Recommendation #3**

As recommended by the Standing Committee on Health in [A Diabetes Strategy for Canada](#), the Government of Canada should invest in the implementation of a national diabetes strategy (Diabetes 360<sup>o</sup>) with specific outcomes for the different types of diabetes.

# 100 YEARS OF INSULIN

## Investing in Canadians with type 1 diabetes (T1D)

More than a century ago, treatment for diabetes meant restricting calories and carbs. Life was short following onset of diabetes, typically two years for adults and a year for children, ending in blindness, loss of limbs, kidney failure, heart attack or stroke.

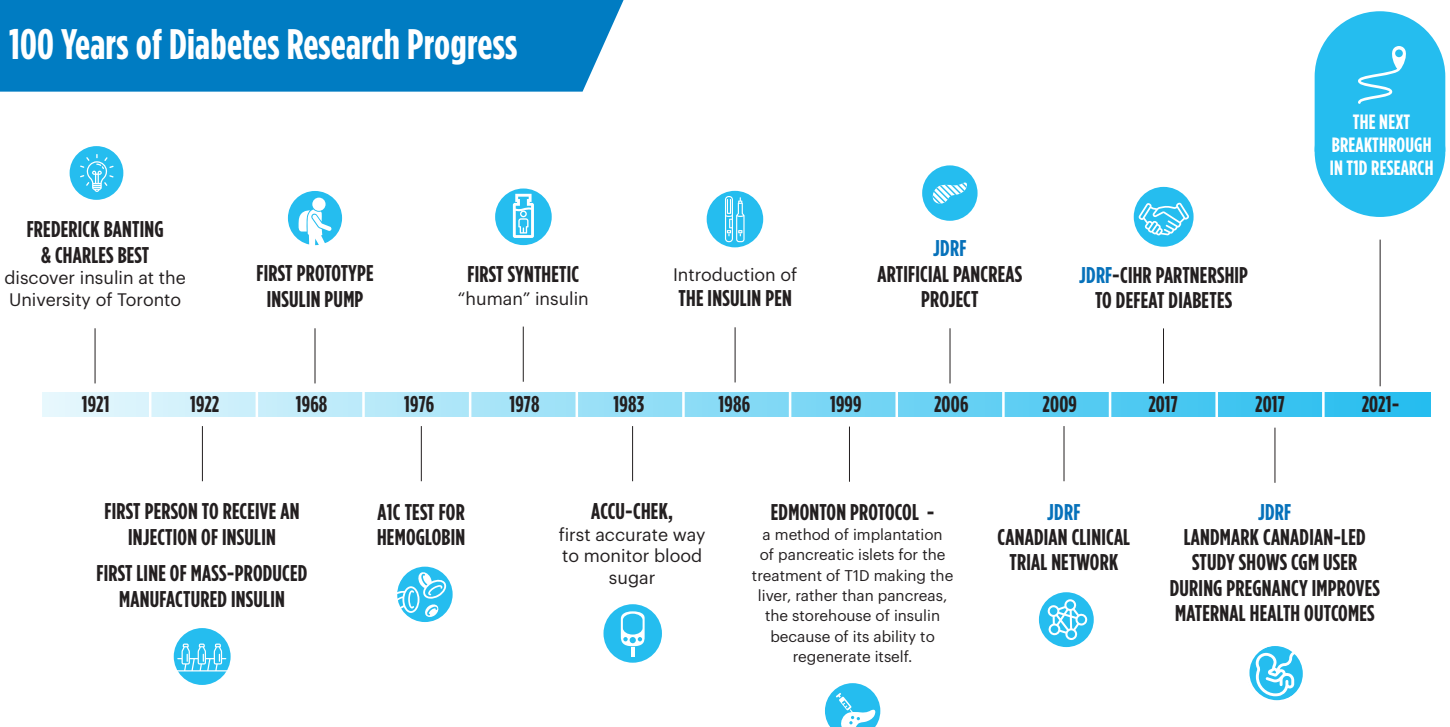
The discovery of insulin in 1921 by Canadians Sir Frederick J. Banting and Dr. Charles Best made it possible to manage diabetes. Often described as Canada's gift to the world, insulin therapy is one of history's great medical achievements. It has saved millions of lives and is an essential medicine for up to 200 million people globally.

For the 1.2 million Canadians who rely on insulin and their families, next year's anniversary is bittersweet. Banting himself was quoted as saying "Insulin is not a cure for diabetes; it is a treatment."

Moving beyond insulin will require continued Canadian support for diabetes research. From the discovery of stem cells in the 1960s to the Edmonton Protocol for islet transplantation in the 1990s, Canada continues to play a leading role. This can be seen by the transformative research funded through the *JDRF Canadian Clinical Trial Network* established in 2009 and the *JDRF-CIHR Partnership to Defeat Diabetes* established in 2017.

The COVID-19 pandemic has revealed that people with diabetes are especially vulnerable. Canada must prioritize research that will rapidly translate into better treatments and reduced complications to safeguard the lives of Canadians with diabetes in the face of present and future health threats.

## 100 Years of Diabetes Research Progress



## About Diabetes

**Diabetes is a progressive disease that occurs when blood glucose is too high, resulting in long-term damage to multiple organ systems, including the cardiovascular system, nerves, kidney, eyes, and even the brain. There are multiple types of diabetes, with type 1 and type 2 diabetes (T2D) being most common.**

T1D is a devastating autoimmune disease which affects an estimated 300,000 Canadian adults and children. The disease causes the body's immune system to attack and destroy insulin producing cells in the pancreas, leading to dependence on daily injections or infusions of insulin for life. Those with T1D must carefully and constantly manage their blood sugar levels or risk hospitalization or death.

With type 2 diabetes (T2D), a person's body still produces insulin but is unable to use it effectively. Management of T2D usually involves diet and lifestyle interventions coupled with oral medication but progresses to insulin dependence in approximately 30 per cent of cases.

Although T1D and T2D have different causes, long-term complications are very similar and equally devastating. While JDRF Canada's research focus is T1D, much of the research we fund is relevant to all types of diabetes.

### Economic Impact:

The government's \$15 million will be matched with funding from JDRF and its partners. This investment will fund 15-20 research projects and **200+ high-quality jobs** over five years, ensuring Canada continues to be a global leader in efforts to move beyond insulin towards prevention and cures.



### Recommendation 1:

The Government of Canada should honour next year's centenary of the discovery of insulin through a renewed research investment of \$15M in the *JDRF-CIHR Partnership to Diabetes* to be matched by JDRF and its partners.

As 2021 will mark the 100<sup>th</sup> anniversary of the life-changing discovery of insulin, Canada needs to continue investing in diabetes research and supporting Canadian investigators so we can move beyond insulin and accelerate towards true prevention and cures.

In 2017, the government committed \$15 million to a new *Partnership to Defeat Diabetes* between JDRF and the Canadian Institutes of Health Research (CIHR) to improve the lives of Canadians with T1D and drive efforts to find a cure. Matched with \$15 million from JDRF, this funding is supporting 11 high-impact, internationally relevant projects. Five projects are currently underway and six more commence next year. These cutting-edge projects will: develop virtual care tools and test interventions to prevent T1D complications; uncover how the microbiome influences T1D risk in children; and investigate several new immune therapies and stem cell-based cures for T1D.

The proposed renewal of research funding for this crucial partnership will ensure Canada continues as a world leader in T1D clinical trials and translational research. Projects will focus in areas of shared strategic interest:

- ✓ Prevention of diabetes, especially in children and youth;
- ✓ Early treatment of diabetes, thereby delaying its progression and reducing the risk of complications;
- ✓ Accelerating development of diabetes device technology to enable automated insulin delivery, including in special populations; and
- ✓ Leveraging data using various approaches, such as artificial intelligence, to drive development of personalized treatment of diabetes and its complications.



**Dr. James Shapiro** is renowned for having developed the Edmonton Protocol for islet transplantation.



## Recommendation 2:

As recommended in the Disability Advisory Committee's (DAC) **First Annual Report**, Canadians requiring life-sustaining therapy, including insulin therapy, should automatically qualify for the Disability Tax Credit (DTC).

The DAC was convened by the Minister of National Revenue in the wake of a directive issued by the Canada Revenue Agency in 2017 which saw all adults with type 1 diabetes denied the Disability Tax Credit over a nine-month period.

In its report, the DAC noted that the eligibility criteria for life-sustaining therapy, specifically the requirement that 14 hours per week be spent in eligible activities, is too restrictive:

*In light of all the submissions, survey reports and personal letters from applicants, our committee feels that the CRA must move away from a rigid definition and interpretation of life-sustaining therapy that excludes many potential eligible Canadians from qualifying for the DTC. The undeniable fact is that any individual who requires life-sustaining therapy, by definition, must administer therapies on a daily/weekly basis or they will not survive.*

### Economic Impact:

At present, deserving Canadians with disabilities are denied the DTC despite sharing the same disabilities and financial burden as those who qualify. It is important to address this inequity and help to reduce out of pocket medical expenses for these Canadians so they can more fully participate in the economy and society.



## Recommendation 3:

As recommended by the Standing Committee on Health in *A Diabetes Strategy for Canada*, the Government of Canada should invest in the implementation of a national diabetes strategy (Diabetes 360°) with specific outcomes for the different types of diabetes.

The increasing costs of complications associated with diabetes and the rapid rise in incidence over the past decade mean Canada stands to realize billions of dollars in savings simply by implementing Diabetes 360° at a cost of \$150 million over seven years. As diabetes is one of the most empirically measurable chronic diseases, implementation of a comprehensive strategy based on data on patient health outcomes will serve as a useful model for managing other chronic diseases.

### Economic Impact:

Diabetes Canada estimates that Diabetes 360° can save Canada's healthcare system \$11 billion and Canada's employers a further \$9 billion based on an investment of \$150 million.

## ABOUT JDRF CANADA

JDRF is the leading global organization funding type 1 diabetes (T1D) research. Our mission is to accelerate life-changing breakthroughs to cure, prevent and treat T1D and its complications.

For more information, please visit [jdrf.ca](https://jdrf.ca).

### **Rohan**

Diagnosed at age 4,  
with mother, Nisha

