

Restoration



Imagine...

a future where T1D is just a memory.

Imagine Bill and Jake, both living with type 1 diabetes (T1D).

Each was diagnosed at a different age and in a different decade. And each has benefited from the ongoing advances JDRF research has driven in T1D treatment and care. But, through all the changes that have made their lives easier and healthier, they always believed there would one day be a cure that would allow them to leave diabetes completely behind.

And with the help of decades of support, that day has finally arrived. Because scientists funded by JDRF perfected a therapy that allows the body to restore its own beta cells while teaching the immune system not to attack these new cells. Bill and Jake underwent a course of drug therapy that caused their bodies to “regenerate” new beta cells.

A few months later, their doctors confirmed: they were producing their own insulin again and the new cells were free from attack. They were cured. While they never felt defined by their T1D, it constantly interfered in their lives. Now, they have what so many worked for and dreamed about: a life without T1D.

JDRF isn't just imagining this. We're making it happen.

“Today, they are living a life without T1D.”

An artificial pancreas system, insulin taken just once a day, vaccines that prevent T1D, implanted beta cells free from autoimmune attack, and restoration of beta cells are all part of JDRF's plan to progressively remove T1D from people's lives until it is finally gone.

But as we work to deliver these advances, one fact is inescapable: increased funding is essential. Clinical trials and development are expensive. And for these possibilities to become life-changing realities, JDRF needs your help.

Because with your support we can create a world without T1D.

Visit jdrf.ca to learn how you can turn type one into type none.

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Why

A full biological cure is the ultimate and permanent solution to all the complexity and problems of T1D. The delivery of that cure would mean the fulfillment of JDRF's vision of a world without T1D.

What

We now know that the human body has an amazing ability to heal itself. For a decade, JDRF has been exploring ways to restore the body's ability to produce insulin while preventing the autoimmune attack that triggers T1D. We've funded dozens of human trials to test various immune interventions, and each one has added to our understanding of what's necessary to stop the immune attack. Together, these areas of investigation will eventually yield a permanent cure for T1D.

How

Research to cure T1D still represents the majority of JDRF's research portfolio and we've made tremendous progress over the years. But restoring the body's ability to create new beta cells while simultaneously preventing recurrence of the deadly autoimmune attack is the greatest challenge yet. We're working to accomplish something that no one else has: permanently turning off an autoimmune response. We're confident it can be done, and JDRF is leading the way in funding research aimed at this historic goal.

JDRF researchers have already demonstrated that the body has the ability to grow new beta cells in certain situations, such as pregnancy. Even those with long-term T1D have shown they can still grow beta cells. Now, JDRF is advancing a number of approaches to trigger the body's ability to do the same in all those with T1D. JDRF is also exploring how to reprogram other cells in the body to become beta cells. And we're exploring

ways the pancreas can become its own source of new beta cells.

At the same time, we've discovered a number of suspected triggers associated with the onset of T1D, including certain viruses. This has opened the door to the development of new approaches that would prevent the destructive immune system response in T1D. This might take the form of a viral vaccine, similar to the polio vaccine, or it might be a therapy similar to an allergy shot, which would educate or reeducate the body's immune system not to initiate an attack on the beta cells.

In the last decade the field of regenerative medicine has exploded. JDRF has been, and with your support will remain, at the forefront of this scientific revolution. To make this a reality, an aggressive investment in funding is still required – your contribution will make a difference. Support the most promising route to a cure and together we can turn **type one into type none.**

A drug therapy that encourages a person's pancreas to produce or regenerate new beta cells and teaches the immune system not to attack these new cells; in order for the body to produce insulin.