Prevention

Imagine...

a future without the threat of T1D.

Imagine a young father like Brendan. He doesn't remember a time when he didn't have type 1 diabetes (T1D). Over his 30 years, Brendan has benefited from many new treatment options JDRF helped deliver. In fact, he now enjoys a freedom his friends and family without T1D have taken for granted their entire lives. But of everything he has gained, the most important is knowing he won't have to worry that his child will one day be diagnosed with T1D as well.

That's because JDRF's research over many years has led to highly effective ways to identify children at high risk of developing T1D, allowing doctors to give these kids a series of shots—like a vaccine—that prevents the body from initiating the attack that leads to T1D. As a result, Brendan, his wife, and the proud grandparents can experience the normal joys of a new child, without the fear of T1D.

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

"A decade ago, they would have worried."

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.

Prevention

CURE
TREAT
PREVENT

Why

Preventing people from ever developing T1D is the ultimate answer. Consider polio or smallpox—neither have been cured, but effective vaccines have largely eradicated these diseases from our society.

What

JDRF is pursuing both primary and secondary prevention strategies.

Primary prevention means literally preventing the autoimmune attack so people never develop T1D at all.

Secondary prevention is focused on finding ways to prevent insulin dependence in individuals at risk or where the autoimmune attack on beta cells has already begun.

How

In the primary prevention area, JDRF has identified a number of potential triggers associated with the onset of T1D, including certain viruses. This opens the door to the development of new viral vaccines that stop these triggers and prevent the subsequent autoimmune system attack. Another effective primary prevention strategy involves developing vaccines, similar to allergy shots, that train the body's immune system not to initiate an attack on the beta cells.

JDRF's secondary prevention efforts are aimed at preserving beta cell function in children and adults at risk for T1D, or those who have been recently diagnosed—a critical effort, as new cases overall are growing by four percent annually and the number of kids with T1D is likely to double every 15 or 20 years.

We're looking at several promising avenues to achieve this goal. We know that inflammation of the beta cells is one of the causes of beta cell death. Therefore, we are pursuing strategies that would alleviate this inflammation, thus helping the remaining beta cells to survive. Another route is finding therapies to help beta cells survive attack. For example, the use of autoantigen vaccines and highly targeted immunotherapies that impact only the part of the immune system associated with destroying beta cells may be effective secondary prevention strategies. In addition, we're conducting clinical trials of drugs developed for other conditions that may help with beta cell preservation.

Both primary and secondary prevention approaches show considerable promise, but critical knowledge gaps remain. We need to make progress to screen for the risk, susceptibility, and onset of the autoimmune attack. We need to better understand how the disease progresses to allow us to develop tailored ways to intervene at various early stages to prevent insulin dependence. To make this a reality, an aggressive investment in funding is still required – your contribution will make a difference. Support our efforts and together we can turn **type one into type none.**

A vaccine-like treatment - given to children at high risk of developing T1D - that prevents the body from the immune attack on its own beta cells that leads to developing T1D.