



OUR RESEARCHERS | DR. JENNIFER ESTALL

Thank you for your generosity. Diabetes Canada is grateful to our donors for supporting critical research that will end diabetes.

Through your support, Dr. Jennifer Estall, professor of medicine at the University of Montreal, is bringing us one step closer to improving diabetes treatment.

In healthy individuals, blood sugars are controlled by a hormone called insulin, which lowers blood sugar levels. For people with diabetes, they can no longer produce or use enough insulin to control their blood sugars, which can lead to health complications such as nerve damage, blindness, heart disease, kidney failure, anxiety, amputations, and even death. Type 2 diabetes is caused by several different risk factors including genetics, age, lifestyle, and diet, and accounts for 90% of diabetes cases in Canada.

The PGC-1A protein is linked to higher rates of obesity and diabetes. PGC-1A is a protein that controls how our body uses sugar and fat to make energy. Research shows almost 35% of world's population have a mutated, or different form of PGC-1A. This version of PGC-1A may also impact how well people respond to diabetes treatments.

Not much is known about how this mutation affects the function of PGC-1A, or why it is linked to diabetes. Dr. Jennifer Estall will determine how this mutation changes how the protein works, by investigating how different forms of PGC-1A affects how the body burns and stores food energy and the body's response to exercise, diet, and common treatments for diabetes.

This research will help us understand how a gene influence diabetes risk, how the body tightly controls energy use and storage, and may also help better predict one's response to diabetes treatment.

Thank you for giving hope for a healthier future for people with diabetes.