



COMPLICATIONS | BIOMEDICAL RESEARCH

Project: Changes to muscle structure and function during type 2 diabetes

Through donor support, Dr. Joseph Gordon, Associate Professor in the Department of Biomedical Sciences at University of Prince Edward Island, is working to prevent complications in young people with type 2 diabetes.

In healthy individuals, blood sugars are controlled by a hormone called insulin, which lowers blood sugar levels. For people with type 2 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, sight loss, heart disease, kidney failure, anxiety, amputations, and even death.

Over the past two decades, type 2 diabetes has been affecting more and more younger people across Canada. Developing type 2 diabetes at a younger age greatly increases the risk of severe complications in early adulthood.

Dr. Gordon is building our understanding of how muscle structure and metabolism change with type 2 diabetes. He and his lab are testing whether a protein found in muscle cells called Nix can protect against insulin resistance, and the changes that happen when diabetes develops.

This knowledge will help develop new therapies to treat type 2 diabetes in young people, and reduce their risk of developing long-term complications.