One of the exciting developments in T1D research today is encapsulation. Encapsulation take stem cells and wraps them in a protective barrier. These stem cells are then implanted in the body where they grow into cells capable of producing insulin. Here's what so exciting. Cells that have been encapsulated seem to 1) be protected from destruction in an auto-immune attack and 2) are still able to sense changes in blood sugar levels and release insulin accordingly.

Encapsulation differs from islet cell transplantation in a few ways. First, a very small amount of islet cells are available for transplantation, which means it would not be available for everyone with T1D. Also, people who receive islet cells transplants have to take powerful immunosuppressive drugs which come with a number of side effects and reduce the body's ability to combat infection. Encapsulated cells, however, do not require the use of any immunosuppressive drugs.

Encapsulation is now in human trials bringing hope that people with diabetes could control their diabetes without having to take insulin or do various check blood glucose checks. The hope is that, while not a cure, it could provide a cure-like experience for people living with diabetes.

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This document is not intended to take the place of the care and attention of your personal physician or other professional medical services. Our aim is to promote active participation in your care and treatment by providing information and education. Questions about individual health concerns or specific treatment options should be discussed with your physician.

Recommended

Using an Insulin Pen

Rotating Injection Sites

Tracking and Reviewing Blood Glucose Data

External Resources

Companion Medical – InPen

Sources

JDRF role in beta cell replacement research