The importance of beta cells in preventing long-term complications of type 1 diabetes (T1D).

Screen Today.
Reshape Your Tomorrow.

Type 1 diabetes is an autoimmune disease that gradually destroys pancreatic beta cells that help manage your blood sugar levels. It can occur at any age, and having a family member with type 1 diabetes increases your risk by 15 times. Certain autoimmune conditions or exposure to certain viruses can also increase your risk.

Through new screening options, a simple blood test can detect the autoantibodies that are responsible for attacking the **beta cells** in the pancreas. Advancements in beta cell research have given patients more time to prepare for a type 1 diabetes diagnosis.

What are beta cells?

Your body's insulin is produced by **beta cells** in the pancreas. With type 1 diabetes, your body's immune system slowly attacks the beta cells by mistake. As the beta cells are destroyed, your body makes less and less insulin. Without insulin, your blood glucose or blood sugar gets too high in your blood stream.

Benefits to protecting beta cells:

- Helps maintain balanced blood sugar levels
- Reduces risk of severe high and low blood sugar
- Delays or reduces long-term complications like diabetic ketoacidosis (DKA), a serious condition where blood sugar and insulin levels are imbalanced
- Improves quality of life

Why early detection is important

People with type 1 diabetes in the early stages don't have any symptoms. This early stage can occur for months or years, causing unknown damage to your body. Through a blood test screening, your family doctor can detect the autoantibodies before you even have symptoms of type 1 diabetes. If autoantibodies are found, your family doctor will closely monitor the disease, provide treatment options and coordinate necessary care.

Stages of Type 1 Diabetes

	STAGE 1	STAGE 2	STAGE 3	STAGE 4
	Early stage		Insulin-dependent type 1 diabetes	Long-standing type 1 diabetes
Autoantibodies	Present	Present	Present	May be present
Beta cells	Attack begins	Attack continues	More cells destroyed	Few to none remaining
Blood sugar	Normal	High	High	Depends on external insulin
Signs & symptoms	None	None	Symptoms present	Long-term complications possible
Insulin needs	Not needed	Not needed	Daily insulin dependence begins	Life-long insulin usage

Questions to ask your family doctor:

- ☐ I don't have any family members with type 1 diabetes. Would you recommend that I get screened?
- ☐ How does the autoantibody test work?
- ☐ Is the autoantibody test the same as the A1C test?
- ☐ If I test positive for autoantibodies, does that mean that I have type 1 diabetes?
- ☐ Are there any medications that can help prevent type 1 diabetes from progressing?

Sources:

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