Early Detection of Type 1 Diabetes (T1D)

Type 1 diabetes can now be identified early (before insulin is required) with a simple blood test that can identify T1D autoantibodies. Early detection has many proven benefits, including a reduced risk of diabetic ketoacidosis (DKA) at diagnosis, providing time to plan and prepare, and opening doors to research opportunities or available treatments.1,2

Screening Options

**Option 1: Screen Through a Research Study**

- **TrialNet**
  - For people 2 to 45 years old who have a parent, brother/sister, or child with T1D, or
  - For people 2 to 20 years old who have an aunt/uncle, cousin, grandparent, niece/nephew, or half-brother/sister with T1D
  - For people ages 2 to 45 years with a positive T1D autoantibody test at another lab
  - Lab or at-home tests available

**Option 2: Screen Through Your Doctor’s Office**

Your doctor (or your child’s doctor) can order labs to detect type 1 diabetes autoantibodies and the cost may be covered by your insurance. Consider contacting your insurance company regarding coverage prior to testing.

- **Positive Result?**
  - Positive test results can cause stress and anxiety.
  - Confirmatory testing must be performed, either through TrialNet (free for ages 2-45 years) or your doctor’s office
  - Ask the Experts can provide individualized support for you in partnership with your doctor (visit www.asktheexperts.org or scan QR code)

- **ASK**
  - For all children ages 1-17
  - No family history of type 1 diabetes is required
  - At-home tests available
  - Also screens for Celiac Disease

Information for Healthcare Providers

- **Labs to order (4)**
  - Insulin Autoantibody (IAA)-CPT 86337
  - Glutamic Acid Decarboxylase (GAD) Autoantibody-CPT 86341
  - Islet Antigen 2 (IA-2) Autoantibody-CPT 86341
  - Zinc Transporter 8 (ZnT8) Autoantibody-CPT 86341

- **Related diagnosis codes**
  - Z83.3 - Family history of diabetes
  - R73.9 - Hyperglycemia, unspecified
  - Z13.1 - Screening for diabetes mellitus

International consensus guidance is available for monitoring autoantibody-positive individuals in early-stage T1D.2 (scan below)

- **Negative Result?**
  - Consider additional testing in the future if at risk for developing T1D.

- **Positive Result?**
  - Order confirmatory testing
  - Consider referral to TrialNet for free confirmatory testing and possible referral to research studies
  - Additional metabolic testing: HbA1c, random blood glucose
  - Provide patient education including T1D symptoms
  - If multiple autoantibodies present or dysglycemia, refer to Endocrinology

With your support, we are creating a movement to improve and change life with T1D, advancing breakthroughs on the way to cures.

To find out more about resources and support, visit BreakthroughT1D.org/early-detection/.
Frequently Asked Questions

What is early detection of type 1 diabetes?
T1D develops in stages over time and can be detected by a simple blood test (T1D autoantibody test) before glucose is elevated and insulin is required. T1D autoantibodies signal that the body’s immune system is attacking the insulin-producing cells in the pancreas. If a person has two or more confirmed autoantibodies, they have a high likelihood for progression to stage 3 T1D.

Stages of Type 1 Diabetes

<table>
<thead>
<tr>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple autoantibodies</td>
<td>Autoantibodies present (usually multiple)</td>
<td>Autoantibodies present</td>
</tr>
<tr>
<td>Blood glucose normal</td>
<td>Blood glucose abnormal (dysglycemia)</td>
<td>Blood glucose elevated (hyperglycemia)</td>
</tr>
<tr>
<td>No symptoms</td>
<td>No symptoms</td>
<td>Often symptomatic</td>
</tr>
</tbody>
</table>

Benefits of early detection of type 1 diabetes

- Reduce the risk of diabetic ketoacidosis (DKA) at diagnosis of stage 3 type 1 diabetes
- Introduce autoantibody-positive individuals to research or clinical trials aimed at delaying/preventing the onset of stage 3 T1D
- Refer autoantibody positive individuals to specialists for follow up and consideration of FDA-approved therapies to delay onset of stage 3 T1D
- Give families time to plan and prepare

What are the signs and symptoms of T1D?

- Frequent Urination
- Extreme Thirst
- Dry Mouth
- Fatigue and Weakness
- Increased Appetite
- Unexplained Weight Loss
- Blurred Vision

**Breakthrough T1D content is for informational purposes only and is not a substitute for professional medical advice. Please contact your doctor or other qualified health provider with any questions you may have regarding type 1 diabetes or any medical condition.**