Type 1 Diabetes in North Carolina

Community & Clinical Connections for Prevention & Health Branch | North Carolina DHHS | Division of Public Health

What is type 1 diabetes?

Type 1 diabetes (T1D) is a lifelong disease. The body's defense system attacks the pancreas, so it stops making insulin. Insulin is a hormone that helps the body use sugar (glucose) for energy.[1]

- T1D impacts both children and adults.[1]
- People with T1D depend on external insulin, via injection, inhalation, or infusion with an insulin pump, to survive.[1]
- There are no cures, but early diagnosis, treatment, and management can significantly improve the outcomes for people with type 1 diabetes.[1]

How common is type 1 diabetes?

About **1 million** North Carolinians live with diabetes, according to the CDC.

Of these, **5%** or **50,000** have been diagnosed with type 1 diabetes.[9]

50,615 patients with type 1 diabetes in NC sought care for their diabetes in the past three years.[10]

Of those people living with type 1 diabetes,

8.5% or **4,274** are children

and **92%** or **46,340** are adults (over age 18).[10]

What are signs of T1D?

Warning signs of T1D often appear suddenly and can require immediate medical attention. You may notice:[2,3]

- Feeling very thirsty
- Urinating (peeing) often
- Feeling very hungry
- Losing weight without trying
- Breath that smells fruity
- Trouble breathing
- Dry mouth
- Feeling very tired or weak
- Sudden changes in vision

Diabetic Ketoacidosis (DKA)

DKA is a serious health problem that needs immediate medical attention.[3] DKA happens when too many ketones build up in your blood. Ketones are made when your body doesn't have enough glucose (sugar) for energy and starts to use fat instead. Burning fat makes ketones.[9]

Early Warning Signs of DKA:
- Feeling very thirsty or having a dry mouth
- Needing to pee (urinate) a lot
- High blood sugar levels
- High ketones in your urine (pee)

Other Signs of DKA That May Happen Later:
- Feeling tired all the time
- Dry or red skin
- Feeling sick to your stomach, throwing up, or stomach pain
- Trouble breathing
- Breath that smells fruity or sweet
- Feeling confused or having a hard time focusing

If you notice any of these signs, get medical help right away. DKA is dangerous, but it can be treated if caught early.[9]

Who is more likely to have T1D?

Type 1 diabetes can develop at any age.[4] **Trends show rising prevalence, especially in adults:**

More than **50%** of new stage 3 T1D diagnoses each year are in people aged ≥20 years.[5,6]

37,000 people age ≥20 years
27,000 people under age 20

Approximately **40%** or more of adults with autoimmune T1D are misdiagnosed as type 2 diabetes.[7-9]

What are the risk factors and causes for T1D?

- A known risk factor is having a parent, brother, or sister with type 1 diabetes. Screening is critical for parents and siblings of anyone who lives with T1D.[4]

- Some people have certain genes that increase the chance of developing type 1 diabetes. However, many won't go on to have type 1 diabetes even if they have the genes.[4]

- A trigger in the environment, such as a virus, may also play a part in developing type 1 diabetes.[4]

How do health care professionals diagnose type 1 diabetes?

- Doctors look at symptoms, ask about health history, and order blood tests to check for type 1 diabetes. These tests may check blood sugar, average sugar levels over 2–3 months (called **A1C**), or proteins in the blood that show the immune system is attacking the pancreas (autoantibodies).[1]

- **A1C** is reported as a percentage. A1C for those who do not live with diabetes is below 5.7%. With a diabetes diagnosis, A1C is 6.5% or higher. The general target recommended by the ADA is less than 7% as long as there is not an excessive risk or exposure to low glucose.[1]

Time in Range: A key measure of diabetes management

- Time in Range (TIR) is the percentage of time an individual's glucose levels stay within a target range (commonly 70–180 mg/dL).

- The ADA recommends a TIR goal of 70% or higher for most adults with type 1 diabetes, which equals about 17 hours per day.[1]

Time in Range

- TIR is a valuable complement to A1C because it shows real-time glucose control and helps prevent complications caused by both high and low glucose levels.[1]
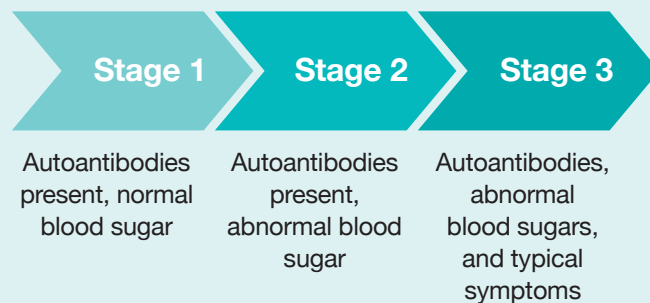
How is type 1 diabetes managed?

- Type 1 diabetes (T1D) requires ongoing attention, but with the right tools and support, it can be managed successfully. People with T1D need to take insulin multiple times a day. Insulin is adjusted based on factors like food, activity, stress, illness, and how long insulin stays active in the body.[1]

- To track glucose levels, individuals may use fingerstick tests several times a day or a continuous glucose monitor (CGM), which tracks glucose in real-time and provides trend data.[1]

- Even with careful management, blood sugar levels can fluctuate throughout the day and sometimes go high or low. In rare cases, these situations can become serious, so it's important to stay alert and responsive.[1]

- With modern technology, planning, and care team support, people with T1D can lead full, active lives.[1]

Early detection of T1D

- T1D can now be identified early (before insulin is required) with a blood test for T1D autoantibodies.[4]

- Early detection provides time to plan and prepare, connect with research opportunities, or access new treatments.[4]

- A medicine called teplizumab can delay the onset of type 1 diabetes in people who already show early warning signs.[4]

T1D Staging

Stage 1 → **Stage 2** → **Stage 3**

Stage 1	Stage 2	Stage 3
Autoantibodies present, normal blood sugar	Autoantibodies present, abnormal blood sugar	Autoantibodies, abnormal blood sugars, and typical symptoms

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10. Data used in this fact sheet came from Epic Cosmos, a dataset created in collaboration with a community of health systems using Epic representing more than 300 million patient records from over 1,762 hospitals and 40.7 clinics as of August 2025. The community represents patients from all 50 states, and D.C., Canada, Lebanon, and Saudi Arabia.