

Why is this important?

Women with T1D often experience **lower rates of fertility** than women without the disease. Some of the factors include:

Irregular Ovulation: Many women with diabetes experience irregular patterns of ovulation, which can exceed 35 days.

Absent Periods: Some women experience periods of amenorrhea, where she previously had a normal cycle but stopped getting a period for 6 months or longer.

Premature Menopause: Women with T1D are more likely to experience premature menopause, meaning their periods stop before they turn 40.

Complications of Pregnancy & Birth: A baby's major organs develop within the first 8 to 12 weeks of a pregnancy, so it's recommended to **keep blood sugar more tightly managed in the years and months leading up to conception**. Persistently high blood glucose levels dramatically increase the risk of diabetic complications during pregnancy as well as abnormal fetal development (particularly of the heart).

How Can We Plan?

Some of these adaptations are already a part of your teen's current management strategy. They include:

Using a period tracker to identify ovulation patterns (although T1D does not inhibit ovulation, tighter glycemic control stabilizes the frequency).

Identifying and monitoring any changes in insulin demand.

Eat the Rainbow: Following a healthy eating pattern that **emphasizes whole grains, grass fed lean meat, essential fatty acids from wild caught fish and seafood, and organic fruits and vegetables.**



Incorporating a pattern of **regular exercise**. **Muscle development enhances insulin sensitivity** and allows your body to transport glucose into the cells.

Avoiding alcohol and smoking

Building a strong social support system

Building your "self management care team."

Resources

There are several robust resources available to help you and your teen along their journey.

These include:

The Juvenile Diabetes Research Foundation
DiaTribe • KidsHealth.org
The American Diabetes Association

And you can always reach out to us with any questions or concerns.



outlook

A Guide for Parents & Caregivers of Teen Girls with Type 1 Diabetes





It's no secret that adolescence poses unique challenges for both parents and caregivers.

It's a time of rapid physiological, hormonal, and emotional changes that can be difficult to manage under the best of circumstances. However, for adolescent girls, a diagnosis of T1D can be particularly vexing.

In addition to navigating complex social relationships and the physical changes surrounding puberty, the adjustments required to manage the disease can add confusion, stress, and frustration to an already complicated life stage.

This brief guide will provide you with some valuable information and connect you to external resources to make the journey easier to navigate and help you both plan for a happy, healthy future.

Changes in Adolescence

Whether your teen has been recently diagnosed, or has been living with and managing her T1D for several years, there may be some adjustments that both she,

and you will need to consider. For most girls, the most obvious sign of puberty is the onset of menstruation between 12-13 years old. However, in girls with T1D, **the onset of a period may be delayed by one to two years.** Menstruation may also cause upward or downward changes in their insulin demand.



The Juvenile Diabetes Research Foundation recommends **keeping a food journal** and **frequent blood glucose monitoring** during these times to identify patterns.

Glycemic Control

Because of rapid growth, increased appetite, and increased caloric demands, adolescents typically have an A1C that is at least 1 point higher than adults. During this time, the effect of insulin drops by thirty to fifty percent. Finally, although insulin lowers blood glucose levels, steroid sex hormones such as estrogen and testosterone, as well as



cortisol, the hormone produced in response to stress, raise it. As a result, your teen's insulin demand will be significantly higher. At times it may be difficult to isolate which "problem" is the problem: T1D or puberty, but **careful planning and monitoring** can help both you and your teen stay in control.

Freedom, Fertility, and the Future

With so many changes happening in their lives and bodies due to puberty and managing their T1D, it may seem that your adolescent is decades from considering the effects of their diabetes on fertility, pregnancy, and future parenthood.

However, girls with T1D grow up to be women with T1D, and the best health outcomes in any age group are directly related to **maintaining tight glycemic control.** It's never too early to begin building a strategy to **keep your teen's A1C regulated to levels as close to "normal" as possible.** In adolescents, this value is <7.0%. As hormones stabilize and they approach adulthood, it's <6.0%.