EVIDENCE BASED Birth®

Evidence that Empowers!

Evidence on: Diagnosing Gestational Diabetes

By Rebecca Dekker, PhD, RN, APRN of EvidenceBasedBirth.com

Question: What is gestational diabetes?

Answer: *Gestational diabetes mellitus* (GDM) is high blood sugar that develops during pregnancy.

Question: What are the risk factors for GDM?

Answer: Here are some of the risk factors for GDM.

Higher Risk for GDM	Lower Risk for GDM
• Being plus-size • Increasing maternal age • History of GDM • History of having a large for gestational age baby • Diabetes in a close relative • Belonging to an ethnic group at increased risk for GDM	• Age younger than 25 years • Weight "normal" before pregnancy (BMI ≤25 kg/m2) • No close relatives with diabetes • No history of glucose intolerance • No history of poor birth outcomes

Having a pre-pregnancy body mass index (BMI) of 25 or higher is one of the main risk factors for GDM. However, about a quarter of people with GDM have a "normal" BMI before pregnancy (Kim et al. 2010). Age is another important risk factor. About 1% of people younger than 21 have GDM, compared to 9% of those older than 35 (Chen et al., 2009). If you meet all of the "lower risk" criteria above, your chance of getting GDM is only about 5% (Avalos et al. 2013).

Question: What problems can result from gestational diabetes?

Answer: Researchers have found that health risks increase step-by-step with every small increase in blood sugar levels. Because of the continuous increase in risk, there is no blood sugar level where we can say "You will have problems" or "You won't have problems." However, here are some of the health problems that can result from GDM:

- Pre-eclampsia
- Fetal high blood sugar
- First-time Cesarean
- Premature birth
- Higher birth weight/having a large baby
- Shoulder dystocia or birth injury
- Newborn intensive care
- Newborn jaundice
- Newborn low blood sugar
- The mother developing diabetes and/or heart disease later in life
- The baby developing excess body weight and/or diabetes later in life

Question: What are the different glucose tests for GDM?

Answer: There are two main ways to test for GDM. All around the world, most countries use a version of the *one-part diagnostic method*. In this test, everybody drinks a 75-gram glucose solution. Blood sugar is measured after fasting and at 1 and 2-hours after the test. GDM is diagnosed when any of the blood sugar values are met or exceeded (92 mg/dL fasting, 180 mg/dL at 1-hour, 153 mg/dL at 2-hours).

However, the most common way of screening and testing for GDM in the U.S. is with the *two-part screening and diagnostic method*. First, the mother drinks 50 grams of glucose solution (Glucola) all at once, and her blood sugar is tested one hour later. If this *screening* test shows a high blood sugar level (130-140 mg/dL or higher, set by the institution), then the mother is asked to follow up with a 100-gram, 3-hour fasting *diagnostic* test on a different day (ADA , 2018). Different hospitals use different criteria for diagnosing GDM with this method (see our Signature Article for more details). This method results in fewer positive diagnoses than the one-part screening method, described above.

Question: Are there any alternatives to drinking the glucose beverage?

Answer: Some people are unable to drink the entire glucose beverage because of side effects such as nausea or vomiting. In those cases, they might be interested in alternatives. Substituting sugar from candy, juice, or food might not screen as well for GDM compared to the standard glucose drink. If you are unable or unwilling to drink the standard glucose drink, you may want to discuss other options with your care provider, such as monitoring your blood sugar at home, or drinking pure dextrose dissolved in water. Unfortunately, we have very little evidence on alternative options at this time.

Question: Why should I get screened for GDM?

Answer: Screening and/or diagnosis for GDM is important because it means that people who have GDM can be treated with diet, exercise, and medications as needed. There is strong evidence from randomized trials that treating GDM improves birth outcomes for mothers and babies. Treatment cuts the risk of large birth weight by 50% and shoulder dystocia (when the baby's shoulders get stuck during birth) by 60% (Farrar et al. 2017) . In two trials, mothers reported higher quality of life after treatment for GDM.

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Question: What happens if I am diagnosed with GDM?

Answer: Receiving a diagnosis of GDM can be stressful. However, the benefits of a positive test are that you can uncover the potential for health problems before they actually occur. If you are diagnosed with GDM, you should get counseling on nutrition, blood sugar monitoring, and exercise. If your blood sugar remains high after these changes, your provider can prescribe medication as needed. These actions can help improve your health and birth outcomes.

> **"High blood sugar can cause problems, but it can be treated with diet, exercise, and sometimes medication."**

Resources:

The book *Real Food for Pregnancy* by Lily Nichols, RDN, CDE, is a great source of information on eating well throughout the entire pregnancy. She also has a book called *Real Food for Gestational Diabetes* for people who have been diagnosed with GDM and want to try and manage their blood sugar levels with diet.

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