

# Journal of Diabetes Research and Endocrinology

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# **Diagnosing Gestational Diabetes: Tests and Procedures**

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#### **DESCRIPTION**

Gestational diabetes is a condition that arises during pregnancy when the body cannot effectively use insulin, leading to elevated blood sugar levels. Early diagnosis is crucial to managing the condition and ensuring a healthy pregnancy for both mother and baby. Various tests and procedures are used to diagnose gestational diabetes, which typically occur during the second trimester of pregnancy. At the first prenatal visit, healthcare providers assess risk factors such as family history of diabetes, obesity, and previous history of gestational diabetes. Women with significant risk factors may undergo early testing. The GCT is a preliminary screening test usually performed between 24 weeks and 28 weeks of gestation. The patient consumes a sugary drink containing 50 grams of glucose, and blood sugar levels are measured one hour later. This test does not require fasting. A blood sugar level below 140 mg/dL is considered normal. If the level is higher, further testing is needed to confirm gestational diabetes. The OGTT is the definitive test for diagnosing gestational diabetes. It is usually conducted if the GCT results are elevated. The test requires fasting for at least eight hours before the procedure. The test begins with a fasting blood sugar measurement. The patient then consumes a drink containing 75 grams or 100 grams of glucose. Blood sugar levels are measured at multiple intervals: fasting, one hour, two hours, and sometimes three hours after consuming the glucose drink. The following criteria (using a 75-gram glucose load) are used to diagnose gestational diabetes The Haemoglobin A1c test measures average blood sugar levels over the past two to three months. While not typically used for diagnosing gestational diabetes, it can provide additional information on blood sugar control. Levels above 5.7% may indicate a higher risk of diabetes. In some cases, healthcare providers may recommend continuous glucose monitoring. A small sensor is placed under the skin to measure blood sugar levels throughout the day. This provides detailed information on blood sugar fluctuations and helps tailor treatment plans. Once diagnosed with gestational diabetes, women are advised to monitor their blood sugar levels regularly. This typically involves checking fasting blood sugar levels in the morning

and postprandial (after meals) levels throughout the day. Keeping a log of these readings helps healthcare providers assess the effectiveness of treatment. Registered dietitians or diabetes educators provide guidance on meal planning to manage blood sugar levels. A balanced diet with appropriate portions of carbohydrates, proteins, and fats is crucial for controlling gestational diabetes. Regular physical activity, such as walking or prenatal exercise classes, helps improve insulin sensitivity and maintain healthy blood sugar levels. Exercise recommendations should be tailored to individual needs and discussed with healthcare providers. If lifestyle modifications are insufficient to control blood sugar levels, medications may be prescribed. Insulin therapy is commonly used as it does not cross the placenta and is safe for the baby. Oral medications, such as metformin, may also be considered. Early diagnosis and proper management of gestational diabetes are crucial for preventing complications. Uncontrolled gestational diabetes can lead to excessive fatal growth (macrosomia), increasing the risk of birth injuries and caesarean delivery. It can also cause preterm birth, respiratory distress syndrome, and low blood sugar levels in the new-born. For the mother, gestational diabetes increases the risk of developing high blood pressure and preeclampsia during pregnancy. Long-term, women with gestational diabetes have a higher likelihood of developing Type 2 diabetes. Diagnosing gestational diabetes involves a series of tests and procedures designed to detect abnormal blood sugar levels early in pregnancy. The Glucose Challenge Test (GCT) and Oral Glucose Tolerance Test (OGTT) are essential for accurate diagnosis. Once diagnosed, a combination of lifestyle modifications, regular monitoring, and possibly medication helps manage the condition effectively. Early diagnosis and management are vital to ensuring a healthy pregnancy and reducing the risk of complications for both mother and baby.

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## **CONFLICT OF INTEREST**

The author's declared that they have no conflict of interest.

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