

Gestational diabetes: A practical approach

If you are tested for gestational diabetes (GD), the odds range somewhere between three and fifteen percent that you will be diagnosed as a gestational diabetic, meaning “elevated blood-sugar values in pregnancy.” Your chances depend on such factors as your race and your age, but most especially, on the testing threshold used and your weight before pregnancy (14,35-36,43,48).

Most doctors and some midwives believe GD to be a condition that can cause serious complications if not closely monitored and aggressively treated, chief among them being a high-weight baby. Women identified as gestational diabetics will be prescribed restrictive diets, including reduced calorie diets, have frequent testing for blood-sugar levels, and possibly insulin injections. They will probably have repeated tests to evaluate the baby’s wellbeing and an ultrasound scan to estimate weight. Women may have labor induced or even have a planned cesarean. After birth, the baby may have heel pricks to measure blood sugar. Based on results, the baby may be given bottles of sugar water or formula or removed to the nursery for observation.

Despite these practices, the research has not established the degree, if any, to which high blood-glucose levels short of true diabetes cause harm. This is because mildly elevated blood-sugar tends to be found in company with known risk factors. For example, most gestational diabetics are high-weight women. High-weight women are far more likely to have high-weight babies and to have high blood pressure. We also have little evidence that GD treatment has benefits, but studies do show that it has hazards. In particular, identification as a gestational diabetic increases the probability of c-section apart from any consideration of birth weight.

All of this presents you with a series of decisions, the first of which is whether to agree to be screened for GD. If you decide to go ahead with GD testing, you will want to try to ensure that any abnormal results are real and not due to the vagaries of the testing process. Finally, if you are diagnosed as a gestational diabetic, you will want to minimize your chances of experiencing the drawbacks of GD treatment. The rest of this article will help you make those choices and achieve those goals.

Informed Decision-Making Issues

Should you agree to be screened?

(Screening consists of having blood drawn and blood glucose measured usually an hour after drinking a concentrated glucose solution. Women screening positive go on to a definitive test, the Oral Glucose Tolerance Test. The OGTT usually involves having blood drawn after an overnight fast and then one, two, and three hours after drinking the sugar solution.)

Pros: Some women may be undiagnosed diabetics or have been tipped into true diabetes by the extra demands of pregnancy (about 1 in 1,000 pregnant women) (3). Screening will reveal this. Developing gestational diabetes in pregnancy indicates higher risk for developing true diabetes later in life. This may provide greater motivation to lose weight and exercise regularly, which may reduce this risk (13).

Cons: Neither the OGTT nor the screening test are reliable tests in that they give different results when repeated in the same person (8,24). In addition, blood glucose values rise as pregnancy advances, but no adjustments are made for this. This means you could “fail” a test in week 28 that you would have “passed” had you taken it in week 24 (17). The various thresholds used to diagnose GD are purely arbitrary (11,28-29,40,43). None of them correlate with the appearance of or a marked increase in complications. Studies fail to show that treatment reduces adverse outcomes such as overlarge babies

(16). However, being identified as a gestational diabetic greatly increases the chance of having a cesarean simply because of the diagnosis, not because of problems such as overlarge baby (5,21,37,42). For these reasons, several organizational bodies have opposed GD testing. *A Guide to Effective Care in Pregnancy and Childbirth*, the bible of evidence-based care, relegates screening, diet, and diet plus insulin to “Forms of Care Unlikely to be Beneficial (16).” The American College of Obstetricians and Gynecologists says no data support the benefits of screening (1). The U.S. Preventative Services Task Force and the Canadian Task Force on the Periodic Health Examination both conclude that there is insufficient evidence to justify universal GD screening (7,15).

Suggestion: Before agreeing to be screened, you should know how your doctor or midwife handles GD. You might consider being screened but refusing extra care and treatment except when test results indicate true diabetes. If you agree to screening, take the test as early in pregnancy as it is offered (46). Also, take it early in the day; sugar values tend to be lower than in the afternoon (2). If you are not told to fast, eat one to two hours before the test (44). Insist on using the World Health Organization or the National Diabetes Data Group criteria for the screening test and, if you get that far, the OGTT. They have higher thresholds than other testing schemes in common use. Setting lower thresholds greatly increases the number of women diagnosed as gestational diabetics without improving outcomes (39,43).

Should you agree to a reduced calorie diet or to routine or aggressive use of insulin?

Pros: Some studies have shown that this can reduce the incidence of big babies, although reducing this incidence often doesn't reduce high cesarean rates (16).

Cons: Restricting calories or limiting glucose availability by injecting insulin manipulates the growth mechanism of the seventy to eighty percent of babies who would not weigh in the upper range even if GD were left untreated, not to mention the ten percent or so who genetically were supposed to be big. Aggressive diets and insulin use can cause starvation metabolism (ketosis), which produces byproducts known to be toxic to the baby (27). These diets can also result in underweight babies, and symptomatic episodes of low blood sugar (hypoglycemia) (5,30,32). Limiting food intake can also lead to malnutrition (26).

Should you agree to fetal surveillance tests (nonstress test, stress test, biophysical profile, amniotic fluid volume measurement) before your due date or ultrasound scans to estimate birth weight?

Pros: None.

Cons: GD babies are not at any greater risk than non-GD babies with the possible exception of those whose mothers have sugar values in the range of true diabetes. On the other hand, all fetal surveillance tests have high false-positive rates, meaning the test indicates a problem that isn't really there. This can lead to an unnecessary induction or cesarean. Ultrasound scans predict high birth weight poorly and the obstetrician's belief that the baby is big increases the chances of cesarean independent of the baby's actual weight (9-10,12,25,34,38,47).

Should you agree to routine induction or induction for suspected big baby?

Pros: None (16). Some doctors believe that inducing labor at or before 40 weeks or for suspected large baby will reduce the risk of cesarean for poor progress or having the shoulders hang up during the birth (shoulder dystocia). Studies show this isn't so (10,12,18,22,33,47). A few doctors believe that routine induction at or before the due date prevents stillbirth, but in the absence of other risk factors, GD babies are not at increased risk (7).

Cons: Inducing labor increases the incidence of fetal distress and cesarean section (19).

Should you agree to planned cesarean?

Pros: None (16,41).

Cons: A cesarean section is major surgery with all that entails in pain, debility, and potential complications, including life-threatening and chronic complications. In addition, the presence of scar tissue and the uterine scar threaten the life and health of mother and baby in future pregnancies.

Should you agree to routine testing for newborn low blood sugar?

Pros: Babies of mothers with GD sometimes develop low blood sugar.

Cons: Babies not displaying symptoms of low blood sugar such as tremor are unlikely to have a problem requiring treatment. Testing involves one or more heel pricks. The baby may be separated from you for observation in the nursery or given bottles of sugar water or formula, which interferes with establishing breastfeeding.

Suggestion: Refuse routine testing. Medical staff usually tests large babies, small babies, babies born after a difficult labor -- all situations increasing the odds of low blood sugar -- and babies with symptoms of low blood sugar in any case.

7 Common-Sense Measures to Help Prevent a Diagnosis of Gestational Diabetes

- 1. If you are overweight, lose weight before pregnancy.** Do not attempt to lose weight if you are already pregnant.
- 2. Eat a diet low in simple sugars and high in fiber.** Avoid processed foods. For example, eat whole wheat toast and an orange rather than bran flakes and orange juice (23,26).
- 3. Eat frequent, small meals** to help stabilize your blood sugar (26).
- 4. Engage in moderate, regular exercise.** This can also help lower your blood pressure(6).
- 5. Try further dietary adjustment and increase exercise if glucose values are still not under control.** This can help you avoid insulin therapy (6).
- 6. Help prevent a false positive on the Oral Glucose Tolerance Test (OGTT).** Eat a high carbohydrate diet for three days prior to the test; don't smoke during the test; and postpone the test if you are ill, have an infection or have been confined to bed. All of these can elevate blood sugar (8).
- 7. Give visualization and relaxation techniques a try.** They may help reduce anxiety which also raises blood glucose levels.

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