

Glucose Tolerance Screening

Gestational diabetes mellitus (GDM) is any degree of glucose intolerance with onset or first recognition during pregnancy (1). The Second International Workshop Conference on Gestational Diabetes recommends that all pregnant women should be routinely screened for gestational diabetes mellitus between the 24th and 28th week of gestation(2). If a woman is diagnosed with gestational diabetes she is at risk of having a large baby, a fetal death in utero or a stillbirth. Yet, perinatal mortality rates are difficult to attribute to gestational diabetes alone. Large babies and the complications related to birthing them, such as shoulder dystocia and cesarean delivery, may be due to the mother's obesity and not a direct result of a diabetic state.

There are two tests that are currently in use to measure serum glucose levels in the mother that may indicate GDM.

The vast majority of women will be offered the glucose challenge test. This test involves drinking a 50 g. glucose beverage (commonly called glucola) and having blood drawn one hour later to be tested for plasma glucose levels(3).

Those women at high risk for developing diabetes, due to age, obesity, a family history of diabetes or a personal history of a previous large baby or stillbirth are encouraged to take the glucose tolerance test. For this screening, the woman ingest a 100 g. glucose beverage and her blood levels are tested after a three hour period(4). If a woman has a positive or borderline plasma reading after the 50 g. /1 hour test, she will be advised to undergo the 100g/3 hour screening.

If you are considering taking the 50 g/1 hour glucose challenge test, a peculiar alternative to drinking the glucola solution is eating 28 jelly beans. It

was found that jelly beans (50 grams of a simple carbohydrate) can be used as the sugar source for gestational diabetes screening (5). Both the glucose beverage and the jelly beans produced similar results. Women had fewer adverse side effects from the jelly beans and were less likely to feel ill or nauseous.

A survey of obstetricians revealed that 94% of them perform the glucose challenge test on all their patients (6). By merely assigning the label of GDM to their patients, even if they are successfully diagnosed and treated during their pregnancy, they are perceived as high risk and are more likely to have a cesarean section due to the anticipated likelihood of a larger baby and possible birth complications(7).

Glucose testing is controversial due in part to the inability to reproduce the results. Women are tested with no regard to the time since their last meal, or hour of the day. Variability can occur between one day and the next and the reasons for this are not clear(8).

The test is not always accurate. When pregnant women were tested on two consecutive days using the 50g/1 hour glucose challenge, ten percent of women with gestational diabetes had test results that did not indicate their condition. Among 21 women tested, there was not difference in screening results between women with diabetes and those without(9).

If you were screened for gestational diabetes in a previous pregnancy it may not be necessary to be screened again for a subsequent pregnancy. Women with a normal glucose reading in a past pregnancy have less than a one percent chance that gestational diabetes will develop within four years (10). If you do not wish to undergo further screening, make your physician aware of this.

In a review published in 1989(11) involving gestational diabetes and

screening mechanisms, it was reported that the glucose tolerance test was poorly reproducible, that the perinatal morbidity (sickness) and mortality (death) associated with gestational diabetes have been “considerably overemphasized” and that no population has yet to be demonstrated that benefits from screening, diagnosis and treatment. The authors concluded, “Except for research purposes, all forms of glucose tolerance testing should be stopped.”

The American Diabetes Association recommends that women of normal weight who are less than 25 years old with no family history and low risk factors need not be screened (12).

This obviously goes against the fellowship of AGOG (American College of Obstetricians and Gynecologists) members, who practice universal screening of all pregnant women, regardless of risk factors(13). This is not unusual, as obstetricians are not typically a “wait-and-see” kind of group. Much of what the medical establishment does for the sake of health and well being of its patients is not supported by clinical evidence.

If you feel that glucose screening is essential, then have it done. But do not succumb to yet another routine test without the knowledge of its inconsistencies and the understanding of its consequences. In this case, misdiagnosis and an increased risk of cesarean delivery.