

## **Gestational Diabetes Screening – Informed Choice Agreement**

When we eat food it is broken down by our bodies into small parts. One of these small parts is sugar, which is used as an energy source for our cells. After sugar is broken down, it is released into our bloodstream in a form called glucose. Our bodies produce insulin to help sugar get to our cells; without insulin, our cells would starve even if we had plenty of sugar available in our bloodstream. Sometimes people don't make enough insulin to allow sugar into their cells, a condition called Diabetes Mellitus Type 1. People with this disease have to take daily insulin injections so that glucose can get into their cells; otherwise, their cells would starve. In other cases, cells may become resistant to insulin, resulting in less sugar getting to their cells. This condition is called Diabetes Mellitus Type 2, or Insulin-resistant Diabetes. People with this disease can usually control their disease with a special diet.

### **Glucose in Pregnancy**

During pregnancy, the sugar in our blood flows past the placenta and feeds the growing baby. Because babies are growing all the time while in the uterus, they need to have sugars and other nutrients available to them all the time. To do this, the placenta makes a hormone called Human Placental Lactogen (HPL). HPL tells the body to make less insulin, which means that more sugar stays in the bloodstream for the baby to use. Because of this, it is normal for a pregnant woman to have a higher amount of sugar in their blood – called the blood sugar or glucose level – than non-pregnant people do. Rarely, a woman can have problems in pregnancy with the level of sugar in her blood being too high. This condition is called hyperglycemia or Gestational Diabetes. If glucose levels are too high in pregnancy problems can occur, including:

- The baby could grow very large, because it is being fed a very sugary diet. An extra large baby has a higher risk of problems at delivery, such as cephalopelvic disproportion, shoulder dystocia and birth injury.
- The baby could be born used to a sugary diet, and then develop very low blood sugar when the sugar rich diet goes away after birth. This condition of very low glucose is called neonatal hypoglycemia, and can be dangerous to the baby if not recognized and treated promptly with frequent nursing.
- In pregnancies where glucose levels are similar to those with Type 1 or Type 2 Diabetes, both mother and baby's health could be jeopardized by cell starvation and side effects of very sugary blood.

### **Testing for Gestational Diabetes**

Because very high blood sugar levels in pregnancy can cause problems, most practitioners screen for Gestational Diabetes. Remember, a screen is not a diagnostic test. Screening tests give us a "heads-up" that a problem may be present. There are several ways to do this.

1. Early in your pregnancy (before 16 weeks), your glucose levels can be checked in a random plasma glucose test. This test, which requires a blood draw from you arm, indicates what amount of glucose is normal for you before pregnancy hormones like HPL kick in.
2. Later in pregnancy (around 28 weeks), your glucose levels can be checked again, in either another random plasma glucose test or with a finger-prick test of you capillary glucose levels. This indicates how high your blood sugar is rising under the influence of HPL.
3. A blood test called a Glucose Screen could be performed. For this test, you drink a 50-gram glucose drink. One hour later your blood is drawn, and sent to the lab where the glucose level is calculated. For most labs, a normal glucose level is 120 mg/dL or less. If the test shows glucose levels of 140 mg/dL or more, the screen is considered "positive", and additional testing is suggested.

Many midwives believe that the Glucose Screen is not an accurate evaluation of how your body is handling glucose. Some practitioners recommend eating a high carbohydrate meal rather than drinking the Glucola to try to improve the accuracy of the screen. This is called a post-prandial (after food) test, and the blood is usually drawn two hours after eating. Glucose Screens are not recommended during any illness, infection, or time of stress, as these factors can affect your metabolism and produce inaccurate results. Testing urine for glucose is not an accurate way of screening for Gestational Diabetes, as the increased filtration rate of the kidneys during pregnancy often allows glucose into the urine even if Gestational Diabetes is not present. Conversely, a woman could have Gestational Diabetes and never spill glucose in her urine.

Check out <http://evidencebasedbirth.com/gestational-diabetes-and-the-glucola-test/> for more information about gestational diabetes testing.

### **Oral Glucose Tolerance Testing: The Diagnostic Test for Diabetes**

If one of the screening tests above indicates a possible problem with blood sugar, an Oral Glucose Tolerance Test (OGTT) may be recommended. To have this test, the pregnant woman stops eating after dinner and goes to the lab in the morning without eating breakfast (a minimum of 12 hours of fasting). Her blood is drawn, after which she drinks 100 gram Glucola beverage. Her blood is drawn one, two and three hours later. The woman is not allowed to eat or drink anything else during this three-hour period. If her blood sugar levels are above normal on two or more of the draws, she is considered to have Gestational Diabetes.

Unfortunately, the current levels used to evaluate the blood sugar amount do not reflect the role of pregnancy hormones (HPL) in raising glucose levels. In fact, the standards used are more stringent than those used to assess Type 1 and Type 2 Diabetes! This means that many people are being diagnosed with Gestational Diabetes who have normal blood sugar levels for pregnancy. Other factors that can affect the results of the test include viral infection, poor diet, hypothyroidism, high Vitamin C intake, use of diuretics, smoking, caffeine consumption, use of steroids, and use of anti-epileptic drugs. Other disadvantages of the OGTT are: it can produce nausea and vomiting; it deprives the growing baby of healthy food for over 15 hours; it leaves women jittery, stressed and light-headed; it takes 3+ hours, necessitating time off work, childcare for other children, etc. and women often feel to unwell to drive themselves home. For all of these reasons, many midwives do not recommend the OGTT unless screening levels are equivalent to criteria established for other forms of Diabetes.

Within the medical model of obstetric care, many doctors routinely order a Glucose Screen, followed by an OGTT if the screen is positive. Baseline glucose levels are not usually ordered in early pregnancy. New medical standards are evolving around Gestational Diabetes, in part because of intense criticism of the two tests used to assess it. More and more medical practitioners are not ordering tests unless risk factors are present.

Risk factors for Gestational Diabetes include:

- Over age 25
- Overweight (weighing 25% above your recommended weight).
- Family history (parents, siblings) of Diabetes Mellitus Type 1 or Type 2
- Member of race or ethnic group with a high risk of Diabetes: Hispanic, Black, Native American, and Asian.

A pregnant woman who presents with many symptoms of Diabetes Mellitus should also be carefully assessed. These symptoms include weight loss, poor wound healing, unquenchable thirst, excessive urination, presence of ketones in urine and or blood, headache, fatigue, poor circulation, and increased appetite.

### **Treating Gestational Diabetes**

In most cases, Gestational Diabetes can be managed by following these dietary guidelines:

- No simple sugars or sweets. This includes white and brown sugar, honey, maple syrup, molasses. Stevia can be used as it does not affect blood sugar levels.
- No more that two servings of fresh fruit daily. Remember, one piece may be two servings.
- No fruit for breakfast or at bedtime.
- Fresh fruit only! NO dried fruit or fruit juice.
- No soda pop, fruit drinks, juice drinks, etc.
- Protein with each meal at least 20% of total calories form protein, with a minimum of 80 grams of protein EVERY day.

In cases where glucose levels are EXTREMELY high, daily monitoring of blood sugar and even insulin injections may be required. This would mean transfer of you care to a physician.

**YOUR CHOICES.** It is your right, and responsibility as a pregnant woman to choose how to handle the issue of gestational diabetes screening. Please select from the options listed below.

Initial Evaluation:

Your initial blood work included a random glucose test; your glucose level was \_\_\_\_

Your initial blood work did not include a random glucose test.

Choose from the following options for screening for Gestational Diabetes:

Capillary glucose test (finger prick) around 28 weeks (in-office)

Glucose Screen test (50 gram glucola with a blood draw one hour later)

Modified Glucose Screen (high carbohydrate meal with a blood draw two hours later)

I do not wish to be screened for Gestational Diabetes.

**I have read and understand the information presented above regarding Gestational Diabetes screening and treatment and my questions/concerns have been addressed to my satisfaction.** I understand the benefits and risks associated with Gestational Diabetes screening and treatment. I understand the risks of uncontrolled high blood sugar to my baby before, during and after birth. I take full responsibility for the health of myself and my child.

Client \_\_\_\_\_ date \_\_\_\_\_ Midwife \_\_\_\_\_ date \_\_\_\_\_