What is Gestational Diabetes?
Gestational diabetes (GDM) is a condition unique to pregnancy. It is not a clinical disease. The condition is defined as an inability of the pregnant mother to tolerate carbohydrates. GDM is present in 3-6% of all pregnancies in the United States. The prevalence varies depending on factors such as age, number of pregnancies, and obesity. Age seems to be a particularly sensitive factor and ethnicity may also be an important factor.

What are the risks of GD?
Screening is recommended because it assists in identifying women at risk for diabetes later in life, enabling her to create lifestyle changes that may prevent the development of diabetes. It is also recommended in effort to discover those in which management may prevent excessively large babies, reducing the risk of birth trauma, cesarean delivery, neonatal hypoglycemia, and elevated jaundice levels in the newborn. Additionally, management can prevent stillbirth.

Mothers with gestational diabetes are also at increased risk for hypertensive disorders, specifically preeclampsia. An increased risk for birth defects is only if the woman is severely hyperglycemic or has previously undiagnosed DM. Mothers with uncomplicated gestational diabetes and whose pregnancies were monitored and glycemia controlled by diet and insulin have not shown to experience excess perinatal mortality. Yet, those with increasing glucose values have demonstrated higher rates of macrosomia and increased incidence of primary cesarean section.

Am I likely to develop GD?
The following are risk factors for developing gestational diabetes (check all that apply):

- Previous baby >9 pounds
- Previous baby with congenital birth defects
- Previous unexplained stillbirth
- Previous pregnancy with GD
- Multiple miscarriages
- Family history of diabetes (parent, sibling)
- BMI exceeding 26
- Excess amniotic fluid
- Recurrent sugar in the urine
- Maternal age over 25
- Recurrent infection (especially yeast)
- Pre-eclampsia
- Chronic hypertension
- Polycystic ovarian syndrome (PCOS)
- Hispanic, Native American, Asian/Pacific Islander, or African American
- Maternal birth weight >9 pounds
- Maternal central fat distribution
- Cigarette smoking
- Multiple pregnancy
- Chronic steroid use

What are the symptoms of GD?
Most mothers have no symptoms of GDM. However, like ordinary diabetes some do experience increased urine output, recurrent urinary glucose and ketones, increased thirst and appetite, recurrent infection and/or slow healing, acetone breath, weakness, and weight loss.

What tests are available?
The American College of Obstetricians recommends universal screening for all pregnant women between 24 and 28 weeks of pregnancy. Women at increase risk for developing GDM, such as those with significant obesity, a strong family history of type 2 diabetes, or a personal history of GDM, glucose intolerance or glucosuria are encouraged to have screening as early as possible in pregnancy and then be re-screened at the 24-28 week of pregnancy or at any time they may have signs or symptoms.

The glucose tolerance test (GTT) is the most commonly used screening procedure. It involves assessing plasma glucose 1 hour after consumption of a 50-g glucose load. If this initial screen is abnormal, it is followed by a 3-hour, 100-g GTT for diagnosis of gestational diabetes. The initial screening is given without regard to prior nourishment, although it may be more sensitive if tested following fasting.

Typically a 50-g commercially prepared glucose drink is provided; however, the conventional medicine glucola drink has ingredients which are known teratogens in pregnancy. Therefore, our practice offers the jelly bean test which is an evidence-based alternative to the glucola. We have found the jelly beans more tolerable with less nausea, bloating, and sweating.

What can I do if I am diagnosed with GD?
Our nurse-midwives can work with clients to address dietary, exercise and supplementation that can improve blood sugar regulation in pregnancy. It may prove necessary to involve consultation with a nutritionist, which would be of an additional expense to you. It may also prove necessary to involve consultation with a maternal fetal medicine specialist, which would also be of an additional expense. You will also need to purchase a blood glucose monitor and test your blood sugars regularly. Your midwifery team and consultants will work together to develop an individual plan for optimizing management.

It is important to understand that while our practice will commit to helping clients diagnosed with gestational diabetes reach optimal childbearing outcomes, we can not do this without your full commitment. Gestational diabetes does increase the risk of pregnancy and birth, and therefore, we do require commitment to any agreed upon treatment plan. Not doing so will invite risk that our nurse-midwives are unwilling to accept and will prove to be a scenario outside the standards of safe homebirth practice.

Are there integrative therapies I can try to optimize my outcomes if I am at risk or diagnosed with GD?
Chromium picolinate (500mg daily) and cinnamon supplementation (up to 6mg daily or as needed) are suggested to optimize blood sugar regulation. Magnesium is another supplement that is highly encouraged for those with a previous history of GDM, obesity, or excessive first trimester symptoms.

If I am diagnosed with GDM, are there other tests I will have to undergo?
Conventional medicine providers encourage twice weekly non-stress tests for the fetus. The evidence is not clear that these are advantageous, but they are not thought to be harmful either. Our practice can offer these screenings to you starting at approximately 32 weeks of pregnancy.

Serial ultrasounds for growth is also recommended. Many babies are larger than the norm in the presence with GDM, but some are smaller. Others don’t thrive and placentas can be compromised. These scans typically start at 28 weeks and repeat every four weeks. Your midwife will talk with you further regarding your options.
Can I still birth at home if I have GDM?
If blood sugar levels can be controlled with diet alone, homebirth may proceed normally. If insulin becomes necessary to control your blood sugars, transfer to a hospital-based provider is necessary. Further, if you are not following our treatment plan and providing inadequate information for your midwife to assess the status of your GDM, we are unable to commit to a birth within the home setting.

It should also be understood that GDM is a high risk pregnancy and will endure the high risk maternity fee. Your midwife will be required to manage your blood sugars, coordinate referrals, provide extensive informed consents, provide additional visits for fetal screenings, and of course, manage a higher risk birth and postpartum period. You will need to determine if you would like to proceed under our care following this diagnosis, as well as pay the additional fee, or transfer care to an obstetrician for further management.

How will my baby be treated after birth?
Breastfeeding should be immediate and often. Newborn babies born to mothers with GDM may experience a dangerous drop in their own blood glucose level following birth. Your midwife will monitor the baby’s glucose closely and you are encouraged to call her with any concerns following her departure. A baby with low glucose levels may appear shaky, have difficulty eating, or may be difficult to arouse.

Your midwife may also talk with you about expressing colostrums during the prenatal period and storing this in the event your newborn may need additional supplementation to ensure an appropriate blood glucose level. This helps to prevent supplementation of artificial breastmilk.

Informed Consent
Screening for gestational diabetes is controversial. Evidence is clear that GDM imposes risk on both mother and baby, yet evidence is not as solid regarding the effects of management following diagnosis of GDM. However, the test itself imposes minimal risk and can be assist in optimizing not only your current pregnancy, but your lifelong health. Based upon the information contained in this document, please indicate your decision regarding gestational diabetes below:

I have read and understand this information and have had an opportunity to ask questions. I am aware of the risks of Gestational Diabetes and have freely chosen to take the following action:

- I have chosen to have my blood sugar tested an hour following ingestion of jelly beans.
- I would like to talk to my nurse-midwife about alternative options.

Mother’s signature  Date  Nurse-Midwife signature  Date

References: