

Sugar and spice, but not so nice: what GDM is made of

Q&A with Thomas Moore, MD

By Michelle Brubaker | August 26, 2014

When the pregnancy test reads “positive,” there are so many things a woman starts to think about – due date, baby names and nursery themes. Gestational diabetes (GDM) is probably not high on that list, but with nearly one quarter of all pregnant women diagnosed with GDM in the first trimester, the condition is quite common and on the rise, and medical professionals are working hard to raise awareness and educate mothers-to-be.

Defined as abnormal blood sugar levels during pregnancy, GDM can lead to complications for both baby and mother if not managed properly. UC San Diego Health’s [Diabetes and Pregnancy Program](#) offers patients diagnosed with GDM comprehensive, specialized care to manage blood sugar levels that result in optimal outcomes during and after pregnancy.



Thomas Moore, MD, with the Department of Reproductive Medicine, is a recognized expert on GDM and leads a team of specialists who provide customized care to this patient population. We asked him to provide some insight about a condition that occurs in roughly 4 percent of all pregnancies.

Question: What is gestational diabetes?

Answer: Almost all women have some degree of impaired glucose regulation as a result of hormonal changes that occur during pregnancy, meaning their blood sugar levels are slightly higher. During pregnancy, there are increased levels of hormones made in the placenta that sometimes block the mother’s insulin, causing even higher levels of blood sugar.

Usually the mother’s pancreas is able to produce more insulin (about three times the normal amount) to overcome the effect of the pregnancy hormones.

However, if the pancreas cannot produce enough insulin, blood sugars will rise to abnormal levels, resulting in GDM.

Although insulin does not cross the placenta, glucose and other nutrients do, so the baby is also getting more sugar and energy needed to grow and develop. The blood sugar that can't be broken down by insulin turns into fat, putting the baby at risk for obesity, both in utero and later in life.

Q: Can you prevent gestational diabetes?

A: Risk factors for gestational diabetes include:

- → If you're over 35
- → A family history of diabetes
- → Being overweight before pregnancy
- → Previously delivering a large baby
- → Being Hispanic, African-American, Native American, Asian American or Pacific Islander
- → Having poor dietary and exercise practices

However, many women who develop GDM have no known risk factors.


The only risk factors that can really be controlled are weight and diet/exercise practices. Women who are overweight before pregnancy are at a much higher risk for developing GDM. Exercise improves glucose control by expediting the process of breaking down sugars.

High carbohydrates and processed foods spike glucose levels and should be avoided.

Most cases of GDM can be managed with a healthy diet and exercise regime, but in more severe cases, oral medications or injected insulin are necessary to control the mother's blood sugars and keep the fetus from being affected.

Q: When is gestational diabetes diagnosed?

A: GDM used to be diagnosed at the start of the third trimester of pregnancy (28 weeks). As it became clearer that some women had high blood sugar levels earlier in pregnancy, new recommendations suggested testing patients sooner.

In 2008, the International Association of Diabetes in Pregnancy Study Groups [recommended](#)  that all women be tested for diabetes at the first prenatal visit with a blood draw focused on the fasting glucose level, which on average should be 90 mg or less.

While this new regimen has been adopted internationally, most health systems in the United States still delay diagnosis and treatment until 28 weeks. However, UC San Diego Health is

testing all women at the first prenatal visit and offering early treatment intervention in hopes of reducing the frequency of obesity in the fetus and newborn.

If diagnosed with GDM, UC San Diego Health patients are offered educational classes, clinical trials, resources and may work closely with a diabetes nurse to monitor diet and blood sugar levels on a daily basis.

Q: What risks does gestational diabetes pose to the mother and baby?

A: GDM can lead to longer labors and a higher risk of either a planned or emergency Cesarean section delivery. In some babies, the higher levels of blood sugar that turns into fat causes the body to grow much bigger than the head and can result in a traumatic vaginal birth, known as “stuck shoulders.”

The baby may also experience extremely low blood sugars and poor lung function after delivery.

Many recent studies have shown that when GDM is poorly controlled during pregnancy, a baby has a higher lifetime risk of childhood and adolescent obesity, high blood pressure, adult onset diabetes and heart disease. Controlling this condition during pregnancy is a gift to the baby for a lifetime.

Q: If you are diagnosed with gestational diabetes, does that mean you will have diabetes after pregnancy?

A: After pregnancy, almost all women who had GDM will revert to normal blood sugar levels. However, more than half of women will develop adult type 2 Diabetes within the next decade of their lives.

Lifestyle changes, like losing pregnancy weight gain and maintaining a healthy diet and exercise program, will significantly minimize this risk.
