Gestational Diabetes of Pregnancy

Gestational Diabetes Mellitus (GDM) can develop during pregnancy when hormones change the way your body uses and responds to insulin. Insulin helps your body to control the level of glucose (sugar) in your blood. If the body cannot produce the insulin it requires, blood glucose levels rise. You may also spill glucose into your urine. If you have too much glucose in your blood over a prolonged period, it can cause medical issues for you and your baby during both pregnancy, birth, and potentially during the postpartum.

Gestational diabetes develops during pregnancy and goes away once the baby and placenta are delivered, although if you are diagnosed with GDM in pregnancy, you have a higher risk of developing Type 2 diabetes in the future. Symptoms of GDM can be subtle and be confused with normal changes during pregnancy. Symptoms may include increased thirst, urination and hunger, blurred vision, nausea, and excess weight gain. It is worthwhile to note you may experience these symptoms in your pregnancy but not have GDM.

What is the significance of developing GDM in pregnancy?

Undiagnosed and *uncontrolled* GDM during pregnancy puts you at higher risk of stillbirth, preterm labour, polyhydramnios, and developing a life-threatening condition called pre-eclampsia. Your baby could potentially grow larger than normal due receiving more glucose than they would if your blood glucose is well controlled. A larger baby comes with the increased risk of experiencing a longer and/or more difficult labour and for delivery and labour injuries such as shoulder dystocia (when baby's shoulder gets caught under your pubic bone) and larger perineal tears. Babies born to parents with GDM are at higher risk for difficulties managing their own blood sugar and temperature immediately after delivery and often need to be monitored more closely.

Are there risk factors for developing GDM?

>35 years of age	You have a BMI >30
Polycystic ovarian syndrome	Ethnicity: Hispanic, African, Aboriginal, Asian, Middle Eastern, South Asian
You've used corticosteroids this pregnancy	You are expecting more than one baby
Maternal family history of diabetes	You had GDM in a previous pregnancy
You are carrying a large baby or have a lot of amniotic fluid	Previous unexplained stillbirth
Previous infant with congenital anomalies	Previous infant who was large for gestational age

It is important to note that GDM can occur in individuals who have no risk factors, and likewise in individuals who have multiple risk factors may not develop GDM at all.

How can I reduce my risk of developing GDM?

Eating a healthy balanced diet favoring fresh vegetables and fruits, lean meats, and healthy fats (e.g avocadoes, nuts, olive oils), and reducing the amount of processed food and refined sugars that you eat.

Physical activity for at least 30 minutes 3-5 days a week can considerably lower your risk of developing GDM.

There are small studies which indicate having adequate levels of Vitamin D can improve your body's ability to manage blood sugar during pregnancy (among other benefits).

Some individuals may still develop GDM despite keeping optimal nutritional and physical activity habits.

How do I know if I have GDM?

The Canadian Diabetes Association, Association of Midwives of Ontario (AOM), and the Canadian Society of Gynecologists and Obstetricians (SOGC) recommend all pregnant individuals are offered screening at 24-28 weeks gestational age for GDM.

Screening involves blood testing wherein you are given an orange sugary drink to consume. Your blood is drawn an hour after you've ingested the drink. This provides a general picture as to how well your body is able to manage blood sugar levels.

Screening and diagnosing GDM is complex. Current screening practices are not perfect, but they are the best that are available. Most, but not all cases of GDM will be caught by screening. For every 100 pregnant individuals who undergo screening, 12-22 cases of GDM will be undetected or misdiagnosed.

What are my screening options?

1. **Oral glucose challenge test (OGCT) –** most common screening, most appropriate for those with no or few risk factors for GDM. It is a non-fasting test in which you are given the sugary drink and your blood is drawn 1hr after ingestion.

2. **Oral glucose tolerance test (OGTT)** – a fasting test in which a fasting glucose blood level is drawn before you are given a larger amount of the sugary drink, and your blood is drawn again at 1hr and 2hrs after ingestion. This test is recommended if you have multiple or significant risk factors for GDM or if you have an elevated OGCT result.

3. **A combination of blood testing** – as decided upon in consultation with your midwife, which may include monitoring at home, or by having your blood drawn at regular intervals to assess random blood glucose levels. This is not recommended as an endocrinologist is the most appropriate professional to monitor ongoing glucose levels and it is not the most optimal way to assess how well your body manages glucose.

4. You may choose not to do any screening at all.

What happens if I screen positive for GDM?

If you've taken the OGCT and your levels are mildly elevated, your midwife will recommend doing the OGTT test to confirm or rule out GDM. If your glucose levels are highly elevated, the OGCT can be considered as diagnostic for GDM. In this case, your midwife will recommend and offer referral to the diabetes management clinic and arrange a consultation with an endocrinologist to monitor and manage your blood sugars.

If you've taken the OGTT alone and have one or more blood draw with an elevated glucose level, you will be diagnosed with GDM and offered a referral to a diabetes management clinic and a consultation with an endocrinologist to monitor and manage your blood sugars.

Your midwife may also recommend doing extra ultrasounds in the last trimester of your pregnancy to monitor the growth of your baby.

Most cases of GDM can be controlled well with modifications to diet and exercise. If you are able to control your glucose with diet and exercise alone, you will remain under the care of your midwife. If you require medication to control your blood glucose, your care will need to be transferred to an obstetrician for the remainder of your pregnancy. Your midwife will offer to remain in a supportive role throughout your pregnancy, labour, and birth. They may also care for you and baby postpartum on request.

Where can I go for further information?

Pregnancy Info.ca (SOGC) - https://www.pregnancyinfo.ca/your-pregnancy/routine-tests/glucose-testing/

Diabetes Pregnancy Canada - http://diabetes-pregnancy.ca/overview-gestational-diabetes/info-gestational-diabetes/

Association of Midwives Clinical Resources for Gestational Diabetes - https://www.ontariomidwives.ca/gestational-diabetes

SOGC Diabetes in Pregnancy 2018 Clinical Guideline - https://www.jogc.com/article/S1701-2163(16)39087-9/fulltext