

# SCREENING AND MANAGEMENT OF DIABETES IN PREGNANCY DURING THE COVID-19 PANDEMIC

This information sheet is intended for health professionals working with pregnant First Nations women in communities to make informed decisions about diabetes screening, care and management.

Diabetes Canada and the Society of Obstetricians and Gynecologists of Canada (SOGC) have released temporary alternative screening guidelines to *provide options for gestational diabetes screening to try to decrease the risk of exposure for pregnant women and minimize use of vital healthcare resources while still providing optimal care*<sup>(1)</sup>.

The interim guidelines suggest substituting the Oral Glucose Tolerance Test (OGTT) with an A1C and random plasma glucose. Screening for pre-existing diabetes recommendations has not changed. All tests would generally be conducted in a laboratory, however, with the wide variety of circumstances and access to services for First Nations communities across British Columbia, the First Nations Health Authority (FNHA) acknowledges that not all communities have convenient and safe access to labs, especially during the current pandemic.

SCREENING FOR DIABETES IN PREGNANCY	
<b>Screening in Early Pregnancy</b>	<p>First Nations individuals who can become pregnant should be screened according to the recommendations outlined in 2018 Diabetes Canada Clinical Practice Guidelines (CPG): 'Type 2 Diabetes and Indigenous People' <a href="#">Chapter 38</a><sup>(2)</sup>. This includes a recommendation that Indigenous women of child-bearing age should be screened for diabetes every 6-12 months.</p> <p>If diabetes status is not known before pregnancy, testing for overt (undiagnosed) diabetes in pregnancy for all First Nations women is recommended due to increased risk<sup>(3)</sup>; however, during the pandemic women with additional risk factors should be prioritized. These risks include:</p> <ul style="list-style-type: none"> <li>• having previously had gestational diabetes,</li> <li>• carrying additional body weight (abdominal obesity), or</li> <li>• having a first degree relative (parent or sibling) with Type 2 Diabetes.</li> </ul> <p>Additional risk factors are outlined in the 2018 Diabetes Canada Clinical Practice Guidelines (CPG): 'Screening for Diabetes in Adults' <a href="#">Chapter 4</a><sup>(4)</sup>.</p> <p>Testing for overt diabetes takes place at the first prenatal appointment. Screening is done with an A1C or fasting plasma glucose (FPG), depending on accessibility to a regional health authority (RHA) laboratory or point of care testing (POCT) equipment.</p> <p>If your community does not have access to laboratory testing or point of care equipment (such as a DCA Vantage), the following options available:</p> <p><b>A1CNow<sup>®+</sup> Testing System</b></p> <p>A handheld point of care test intended for use by professionals that can be ordered in small quantities (10 or 20 tests per box). The accuracy is very similar to that of a lab, but is not currently considered diagnostic in Canada.</p>

	<p>The cost is approximately \$15 to \$20 per test. It is manufactured by a company called <a href="#">PTS Diagnostics</a> out of the United States and is available for shipping from Whitmire Medical, a medical devices company in Washington. Once the tests have been taken out of refrigeration, they are only good for a limited time (~3 months), so it makes more sense for communities to order directly. To order, contact <a href="mailto:roger@whitmiremedical.com">roger@whitmiremedical.com</a>. Or if you have further questions about this testing system, contact the FNHA Diabetes Practice Consultant (contact details below).</p> <p><b>Self-Monitoring Blood Glucose</b></p> <ul style="list-style-type: none"> <li>• Provide the pregnant woman with a glucometer (see section below on <a href="#">Health Benefits Access</a>) for self-monitoring of blood glucose (SMBG) in early pregnancy (refer to <a href="#">SMBG</a> section below). Checking blood sugars for a two-week period could provide information on blood glucose levels and identify the need for confirmation if levels indicate possible diabetes (any fasting blood sugar higher than 7.0 mmol/L or any random blood sugar above 11.1 mmol/L).</li> </ul> <p>Further information for screening for overt diabetes in early pregnancy can be found in the CPG: 'Diabetes and Pregnancy', <a href="#">Chapter 36</a> <sup>(2)</sup>.</p>
<p><b>Gestational Diabetes Screening</b></p>	<p>If diabetes is not detected in early pregnancy, regular screening at 24-28 weeks for gestational diabetes mellitus (GDM) should proceed.</p> <p>The Oral Glucose Tolerance Test (OGTT) is still the best method for diagnosing gestational diabetes and is the preferred method if there is convenient and safe laboratory access. The FNHA recommends the 75 g OGTT Alternative Method (one-step method) for GDM testing with Indigenous women. The diagnostic levels include 1 value met or exceed of FPG <math>\geq 5.1</math> mmol/L, 1hrPG <math>\geq 10.0</math> mmol/L OR 2hrPG <math>\geq 8.5</math> mmol/L.</p> <p>The temporary alternative screening guidelines recommended by Diabetes Canada and SOGC are to be used <b>ONLY IF</b> the COVID-19 pandemic causes severe disruptions to laboratory testing or if a patient is uncomfortable or unable to be tested in a laboratory.</p> <p>If an OGTT is not possible due to COVID-19 interruptions, the temporary alternative screening guidelines can be used, which suggests screening with an A1C and a random plasma glucose (RPG). This approach to screening would mean that access to a laboratory is likely still required. The diagnostic levels are an A1C <math>\geq 5.7\%</math> OR random plasma glucose <math>\geq 11.1</math> mmol/L.</p> <p>In the event that a pregnant woman cannot access a regional health authority lab for screening, there are three options for GDM screening in community:</p> <ol style="list-style-type: none"> <li>1. If possible, conduct an in-community OGTT (Nursing Stations and some Health Centres have this option).</li> <li>2. Complete an A1CNow<sup>®</sup>+ test and/or have the individual do SMBG for 2 weeks.</li> </ol>

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	<p>3. Perform a home or clinic-based glucose tolerance test by taking a fasting blood sugar (at least 8 hours of fasting), followed by consuming 75 g of simple sugar or fast acting carbohydrate (approximately 3 cups (750 mL) juice or regular pop, and then a 1 hr PG blood sugar and a 2 hr PG blood sugar. While this method has potential for error and is not considered diagnostic, it may be more likely to rule out false negatives than by doing a random blood sugar alone. Note: if the individual receives a recommendation to perform an at home glucose tolerance test, it is important to provide detailed instructions regarding fasting and blood glucose measurements to prevent having to do the test multiple times.</p> <p>If any of the readings from the A1CNow<sup>®</sup>+ test, SMBG, or home/clinic-based glucose tolerance test are above the diagnostic level readings, further follow-up should be done to confirm gestational diabetes.</p>
<p><b>Post-Partum Screening</b></p>	<p>If a woman has been diagnosed with GDM, she is at greater risk of developing type 2 diabetes in her lifetime.</p> <p>The standard follow-up recommendation from the 2018 Diabetes Canada CPGs is to do a 75g OGTT at 6 weeks to 6 months post-partum. <b>The Diabetes Canada and SOGC interim screening guidelines DO NOT recommend that women be sent to a laboratory for an OGTT alone.</b> If a 75g OGTT can be safely completed (at a nursing station, for example), it would be advantageous to proceed. If this is not possible, consider conducting an A1C at 3 months to 12 months post-partum, encouraging blood glucose testing for a 2-week period, and/or flagging the individual's file for referral to an OGTT when restrictions are lifted.</p>
<p><b>Health Benefits Access to Blood Glucose Meters</b></p>	<p>The First Nations Health Authority Health Benefits program has adjusted benefits and policies during the COVID-19 pandemic to meet the needs of our clients. If a client is not able to receive an OGTT and there is a strong indication that GDM may be present during the pregnancy (previous GDM and/or additional risk factors), Health Benefits will cover 200 test strips annually. The individual does not need a Certificate of Training from a Diabetes Education Centre to qualify for this coverage. If she requires additional strips during the course of her pregnancy, the physician can submit a Special Authority for additional test strips. Meters can be obtained at no cost from a pharmacist and are provided when the individual is first issued test strips. For more information, call First Nations Health Benefits at <b>1-855-550-5454</b>.</p>
<p><b>Care and Management</b></p>	<p><b><i>Self-Monitoring of Blood Glucose</i></b></p> <p>Frequent SMBG is necessary to make decisions around adjustments to diet and activity, and to guide treatment decisions. The 2018 CPGs identify both fasting and post-prandial testing as important to guide therapy and improve fetal outcomes. Up to 8 blood glucose checks per day (fasting, before each meal, 1 or 2 hours after</p>

meals and before bed) will provide the most information to the pregnant woman and her care provider.

Checking in pairs (before and after meals, before bed and after waking up) supports understanding of the relationship between the two numbers and an opportunity to understand what is working (or not working). It is important to empower the pregnant woman with regard to the purpose and value of SMBG, either as a screening mechanism during the COVID-19 pandemic or as part of the management of diabetes during pregnancy.

### **Nutrition Therapy**

Nutrition therapy is one of the main forms of treatment for gestational diabetes. Nutrition therapy works best when it is designed around the foods that the individual enjoys and that are available. It is also designed to promote adequate nutritional intake without ketosis (occurs when fat is providing most of the fuel for the body), achievement of glycemic goals, appropriate fetal growth and appropriate maternal weight gain <sup>(2)</sup>.

If the individual does not achieve blood glucose targets within 2 weeks of initiation of nutrition therapy (and activity), pharmacological therapy should be initiated. It is ideal if the pregnant woman works alongside a dietitian, nutrition professional, or certified diabetes educator when making nutrition therapy changes to ensure there is no additional risk to the health of the woman and her baby.

Some individuals and families may struggle with food insecurity, which will make it difficult to consume the nutrition therapy as recommended. It is important to not add additional stress to the pregnant woman by setting a diet plan that she cannot afford or does not enjoy. Stress hormones further increase insulin resistance, which can further increase blood sugars. Check out [this resource](#) created by Northern Health to find out how health providers can support people living with household food insecurity.

### **Medication Management**

Insulin therapy is the primary pharmacological treatment. Work with the individual's family doctor, primary care provider, diabetes education centre, or others to choose an insulin therapy approach that is centered around the individual and her circumstances.

*For further information or if you have questions about screening and management of diabetes in pregnancy, contact the FNHA interim Diabetes Practice Consultant Rebecca Sovdi at [Rebecca.sovdi@fnha.ca](mailto:Rebecca.sovdi@fnha.ca).*

### References

- (1) Yamamoto J, et al (2020). *Temporary Alternative Screening Strategy for Gestational Diabetes Screening during the COVID-19 Pandemic*. Toronto: Diabetes Canada Clinical Practice Guidelines Steering Committee and Society of Obstetricians and Gynecologists of Canada. [SOGS-COVID-19](#)
- (2) Crowshoe L, et al (2018). *Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada: Type 2 Diabetes and Indigenous People*. Can J Diabetes, S296-S306.
- (3) Feig D, et al (2018). *Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada: Diabetes and Pregnancy*. Can J Diabetes, S255-S282.
- (4) Ekoe JM, et al (2018). *Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada: Screening for Diabetes in Adults*. Can J Diabetes, S16-S19.