Diagnosis of Diabetes Mellitus – Gestational Diabetes Screen and Confirmatory Procedures

Plasma is collected in Fluoride/Oxalate Grey top tube as follows:

- Gestational Diabetes 50g test:
  - 1 hour after the ingestion of 50g glucose orally

- Gestational Diabetes 75g Test
  - Fasting
  - 1 Hour after the ingestion of 75g glucose orally
  - 2 hours after the ingestion of 75g glucose orally

The 2013 Canadian Diabetes Association (CDA) Clinical Practice Guidelines for the Prevention and Management of Diabetes has recommendations for the screening and diagnosis of Gestational Diabetes Mellitus (GDM).¹

Preferred Approach

The CDA recommends a two-step method as the preferred approach, involving a 1-hour 50g Glucose Challenge Test (GCT), followed by a 2-hour 75g Oral Glucose Tolerance Test (OGTT)¹ See Figure 1a.

Alternative Approach

The CDA acknowledges the endorsement of the one-step approach by other important health authorities, and, thus, supports the one-step approach as an alternative – See Figure 1b. The cut-offs recommended in this approach are based on the HAPO study values associated with the odds ratio of 1.75 for adverse outcomes.²

Diagnosis of GDM may now be made if one value meets or exceeds the 75g OGTT diagnostic cut-off in either approach – See Figure 1a and 1b.
Figure 1 Preferred and Alternative approaches for the screening and diagnosis of Gestational Diabetes Mellitus (modified)¹

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A. Preferred Approach

All pregnant women between 24 and 28 weeks of gestation, or at any stage in high risk pregnancy

50g Glucose Challenge Test with PG 1 hour later

< 7.8 mmol/L
Normal

7.8 – 11.0 mmol/L

≥ 11.1 mmol/L

75g OGTT

B. Alternative Approach

All pregnant women between 24 and 28 weeks of gestation, or at any stage in high risk pregnancy

75g OGTT

FPG ≥ 5.1 mmol/L
AND/OR
1HPG ≥ 10.0 mmol/L
AND/OR
2HPG ≥ 8.5 mmol/L
Gestational Diabetes

References: