

Date: June 4, 2012
To: All Zones: Physicians, Nurses and Laboratories
From: AHS Laboratory Services - Chemistry Network
Re: Definition & Timing for Fasting Glucose Test; Glucose Tolerance Test Decision Cut-off Point

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Key Messages:

Effective June 6, 2012 in Edmonton & Calgary Zones and July 11, 2012 in North, Central & South Zones, the following changes to fasting for glucose tests and to glucose tolerance tests will be made. This will provide standardization across the province.

Fasting for Glucose Tests

- Fasting is defined as nothing to eat, chew, or drink other than small amounts of water. Prescription medication is permitted.
- The minimum fasting time for glucose is 8 hours (Canadian Diabetes Guidelines, 2008).

Glucose Tolerance Test – All types

- If the fasting glucose concentration is greater than 7.8 mmol/L, the tolerance test will not continue. Laboratory procedures for patient reporting will be updated to reflect this change.

Rationale:

The Canadian Diabetes Association guideline (2008) states that a fasting glucose of 7.0 mmol/L or greater is diagnostic of diabetes mellitus. Glucose meters are used by many laboratory collection sites, as they provide a rapid fasting glucose result that is reviewed before administering the glucose drink for a glucose tolerance test. Glucose meters have known bias and imprecision challenges (up to 25%), therefore utilizing a threshold concentration of 7.0 mmol/L to halt a glucose tolerance test is too restrictive. Accordingly, the Laboratory Services Chemistry Network has recommended that a fasting glucose concentration greater than 7.8 mmol/L obtained by any glucose methodology, including glucose meters, be the standard threshold value in Alberta for discontinuing any glucose tolerance test.

Inquiries and feedback may be directed to:

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