

# Laboratory Bulletin

Important News from DCL Medical Laboratories



Revised March 14, 2011. Originally released March 8, 2011.

**Update:** In response to client requests, DCL has chosen to retain the order choice for the 100 gm OB Glucose Tolerance Test 3 Hour [2051]. The test will now be known as Glucose Tolerance OB 3 Hour [2051]. The following Laboratory Bulletin has been revised to reflect this change. All other changes in glucose testing will occur as scheduled.

A new quick reference guide to glucose testing from DCL Medical Laboratories is also included with this updated bulletin. We appreciate your continued support of DCL Medical Laboratories as we make changes to support current guidelines, as well as fulfill our clients' needs.

## **New guidelines from the American Diabetes Association prompt glucose testing changes for DCL Medical Laboratories**

In a supplement to the January 2011 issue of *Diabetes Care*, the American Diabetes Association (ADA) published the latest guidelines and diagnostic criteria for the diagnosis of diabetes. DCL Medical Laboratories has chosen to add, alter and remove order choices for glucose testing to align our test menu with the ADA's current guidelines, as well as simplify ordering and interpretation for our clients.

In this Laboratory Bulletin we provide detailed information regarding specimen collection and diagnostic criteria for the testing available from DCL Medical Laboratories for diabetes and gestational diabetes testing. If you have any questions, please contact DCL Client Services at (317) 874-1334 or toll free at (866) 874-1334.

### **Special Glucose Specimen Labeling Requirements**

Please note that specimens for glucose testing have special specimen labeling requirements. In addition to the general requirement of two patient identifiers that applies to all specimens, blood tubes for timed glucose testing must include the time and date of collection or draw interval. For clients using our online system Copia, interval testing labels contain barcodes specific to the draw interval for that test. For example, you will see "GF" at the end of the accession number for the glucose fasting specimen, "G1H" for the 1 hour specimen and "G2H" for the 2 hour specimen. When placing a computer-generated label onto the specimen container, take care to choose the label showing the correct collection time or draw interval for that container. Misplacement of interval labels will cause glucose testing results to post to the wrong collection hour and can affect interpretation of test results unless manual test result manipulation takes place.

### **The Glucose Tolerance Testing Information Form**

All glucose specimens should be accompanied by a completed Glucose Tolerance Testing Information Form. This form has been updated to reflect the changes in order choices and a new master copy is provided with this notice.

### **Testing for Gestational Diabetes**

The new ADA guidelines call for all pregnant women not known to have diabetes at 24 to 28 weeks gestation to be tested for diabetes using a 2 hour, 75 gm glucose tolerance test. The ADA has developed new gestational diabetes diagnostic cutpoints for the fasting, 1 hour and 2 hour measurements and recommends that a diagnosis of gestational diabetes be made when any of the glucose threshold values are exceeded. Women with risk factors should be screened for undiagnosed type 2 diabetes at the first prenatal visit using standard diagnostic criteria.

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The ADA expects the new criteria will significantly increase the number of women diagnosed with gestational diabetes, however has made the new recommendations with the consideration of a worldwide increase in obesity and diabetes rates.

**In light of the new recommendations, DCL Medical Laboratories will add the order choice, Glucose Tolerance OB [2076] on March 14. DCL will continue to offer the 50 gm Glucose Screen OB [2032] and the 100 gm Glucose Tolerance OB 3 Hour [2051].**

### Glucose Tolerance OB

(New Order Choice)

**Abbreviation:** GLU OB F-75g-1-2H

**DCL Test Code:** 2076

**CPT Code:** 82951

**Instructions:** If SST is drawn, centrifuge within 1 hour of collection. Fasting required. Collect fasting specimen from OB patient, then give a 75 gm glucose tolerance beverage. Draw specimens at 1 hour and 2 hours. Complete the Glucose Testing Information Form.

**Reference Range:** Fasting: 70 - 92; 1H: 70 - 180; 2H: 70 - 153

**Report Comment:** In an effort to increase the identification of women with gestational diabetes and reduce health risk to mother and fetus, the American Diabetes Association has adopted new guidelines for testing pregnant women between 24 and 28 weeks gestation for gestational diabetes; these guidelines have been published by the ADA in *Diabetes Care*, January 2011.

### Glucose Screen OB

(Formerly Glucose Screen, 1Hr 50)

**Abbreviation:** GLU OB 50g-1H

**DCL Test Code:** 2032

**CPT Code:** 82950

**Instructions:** If SST is drawn, centrifuge within 1 hour of collection. Fasting Required. Patient is given a 50 gram glucose tolerance beverage and specimen is drawn one hour later. Complete the Glucose Testing Information Form.

**Reference Range:** 70 - 140 mg/dl

### ADA Revised Screening for Gestational Diabetes

- Screen those with risk factors at the first prenatal visit using standard diagnostic criteria.
- Screen those not known to have diabetes using a 2 hour, 75 Gram Glucose Tolerance Test between 24 and 28 weeks gestation. (Glucose Tolerance OB [2076])
- The test is performed in the morning after an overnight fast of at least 8 hours.
- Patient is drawn at fasting status, 1 hour and 2 hours after drinking the 75 gm glucose tolerance beverage.
- A diagnosis of gestational diabetes is made when any of the following glucose values are met:
  - Fasting:  $\geq 92$  mg/dl
  - 1 hour:  $\geq 180$  mg/dl
  - 2 hours:  $\geq 153$  mg/dl

### Specimen Collection for Glucose Testing

**Collection Container:** Gray-top Tube (preferred) or SST



**Specimen:** Preferred amount: 1.0 mL Plasma/Serum;  
Minimum amount: 0.5 mL Plasma/Serum

**Transport Temperature:** 3 days refrigerated in Gray-top Tube or SST (draw one tube per timed interval)

**Rejection Criteria:** Not centrifuged if in SST

**Glucose Tolerance OB 3 Hour****(Formerly OB Glucose Tolerance Test 3 Hour)****Abbreviation:** GLU OB F-100g-1-2-3H**DCL Test Code:** 2051**CPT Code:** 82951, 82952

**Instructions:** If SST is drawn, centrifuge within 1 hour of collection. Fasting required. Collect fasting specimen from patient, then give a 100 gm glucose tolerance beverage. Draw specimens at 1 hour, 2 hours and 3 hours. Complete the Glucose Testing Information Form.

**Reference Range:** Fasting: 70 - 95; 1H: 70 - 180; 2H: 70 - 155; 3H: 70 - 140 mg/dL

**Report Comment:** In an effort to increase the identification of women with gestational diabetes and reduce health risk to mother and fetus, in January 2011, the American Diabetes Association adopted new guidelines for testing pregnant women between 24 and 28 weeks gestation for gestational diabetes. These guidelines encourage the use of a 75g oral glucose tolerance test with the diagnostic cut points of: Fasting: > 92 mg/dL; 1 Hour: > 180 mg/dL; and 2 Hour: > 154 mg/dL. Choose order choice Glucose Tolerance OB [2076] for a test suited to these guidelines.

**Glucose Testing for Non-OB Patients**

For the Non-OB glucose testing order choices that are supported by the ADA's recommendations, we will change some of the order choice names for consistency and ease of ordering. Reference ranges are also being changed for these tests to better align with ADA recommendations.

**Glucose, Fasting****Abbreviation:** GLU F**DCL Test Code:** 2040**CPT Code:** 82947

**Instructions:** If SST is drawn, centrifuge within 1 hour of collection. Fasting required. Complete the Glucose Testing Information Form.

**Reference Range:** 70 - 99 mg/dL

**Interpretive Statement:** Impaired fasting glucose 100-125 mg/dL; Diagnostic criteria for diabetes mellitus  $\geq 126$  mg/dL

**Glucose, Random****Abbreviation:** GLU R**DCL Test Code:** 2031**CPT Code:** 82947

**Instructions:** If SST is drawn, centrifuge within 1 hour of collection. Please indicate if patient is fasting. Complete the Glucose Testing Information Form.

**Reference Range:** 70 - 115 mg/dL

**Interpretive Statement:** A random glucose of  $\geq 200$  mg/dL with diabetic symptoms meets the diagnostic criteria for diabetes mellitus, if confirmed on a subsequent day. In the absence of unequivocal hyperglycemia, then hemoglobin A1C, fasting glucose or glucose tolerance testing is recommended.

**ADA Criteria for the Diagnosis of Diabetes**

A glucose measurement exceeding any of the following criteria would result in a diagnosis of diabetes. Confirmation by repeat testing is recommended for criteria 1 - 3.

**Criteria 1:** A Hemoglobin A1C result  $\geq 6.5\%$   
[2042] Hemoglobin A1C

**Criteria 2:** A Fasting Glucose result of  $\geq 126$  mg/dl  
[2040] Glucose Fasting

**Criteria 3:** A 2-hour Glucose result of  $\geq 200$  mg/dl  
[2039] Glucose Tolerance Non-OB

**Criteria 4:** A random plasma glucose of  $\geq 200$  mg/dl in a patient with classic symptoms of hyperglycemia or hyperglycemic crisis  
[2031] Glucose Random

**Glucose Tolerance (Non-OB)****(Formerly Glucose, 2Hr 75 G w/Fasting)****Abbreviation:** GLU TT F-75g-2H**DCL Test Code:** 2039**CPT Code:** 82947, 82950**Instructions:** If SST is drawn, centrifuge within 1 hour of collection. Fasting required. Draw a fasting specimen, then give the patient a 75 gm glucose tolerance beverage. Draw a specimen after two hours. Complete the Glucose Testing Information Form.**Reference Range:** Fasting result: 70 - 99 mg/dL; 2 hour result: 70 - 140 mg/dL**Interpretive Statement:** 2 hour result: Impaired glucose tolerance 140-199 mg/dL; Diagnostic criteria for diabetes mellitus  $\geq 200$  mg/dL**Glucose Post Prandial****(Formerly Glucose, 2Hr Post Prandial)****Abbreviation:** GLU PP-2H**DCL Test Code:** 2030**CPT Code:** 82950**Instructions:** If SST is drawn, centrifuge within 1 hour of collection. Draw specimen two hours after the patient has eaten. If the patient drinks a glucose tolerance beverage and has a specimen drawn two hours later, please indicate the amount of glucose tolerance beverage given. Complete the Glucose Testing Information Form.**Reference Range:** 70 - 120 mg/dL**Flexibility for Clients**

Because we recognize that the decision about which test to use to assess a specific patient lies with the physician, DCL will now offer order choices that provide the physician the option to add a draw interval or indicate an alternate glucose load. The addition of these order choices gives clients the flexibility to order the exact glucose testing they desire without the confusion of multiple specific order choices. Please note, however, that reference ranges are not defined for these order choices.

**Glucose Additional Interval****(New Order Choice)****Abbreviation:** Glu Add Int**DCL Test Code:** 2074**CPT Code:** None**Collection Container:** Gray-top Tube (preferred) or SST - Serum**Specimen:** Preferred amount: 1.0 mL Plasma/Serum;  
Minimum amount: 0.5 mL Plasma/Serum**Instructions:** This order choice is to be used in conjunction with a guidelines-based glucose order choice to indicate an additional draw interval. If SST is drawn, centrifuge within 1 hour of collection.**Transport Temperature:** 3 days refrigerated (draw one tube per timed interval)**Rejection Criteria:** Not centrifuged if in SST**Reference Range:** Reference range is not defined.**Glucose Alternate Load****(New Order Choice)****Abbreviation:** Glu Alt Load**DCL Test Code:** 2075**CPT Code:** None**Collection Container:** Gray-top Tube (preferred) or SST - Serum**Specimen:** Preferred amount: 1.0 mL Plasma/Serum;  
Minimum amount: 0.5 mL Plasma/Serum**Instructions:** This order choice is to be used in conjunction with a guidelines-based glucose order choice to indicate that an alternate glucose load was given to the patient. If SST is drawn, centrifuge within 1 hour of collection.**Transport Temperature:** 3 days refrigerated (draw one tube per timed interval)**Rejection Criteria:** Not centrifuged if in SST**Reference Range:** Reference range is not defined.

**Off Guidelines Order Choices to be Discontinued**

In an effort to align with the ADA guidelines, as well as make ordering glucose testing from DCL easier for our clients, we have chosen to discontinue order choices that are not supported by the ADA's recommendations.

**On April 4, 2011, the following order choices will no longer be available.**

Glucose Tolerance, 1Hr [2033]

Glucose Tolerance, 3Hr (Non-OB) [2036]

Glucose Tolerance, 2Hr [2034]

Glucose Tolerance, 4Hr [2037]

Glucose Tolerance, 2Hr and Fasting 100 gm [2035]

Glucose Tolerance, 5Hr [2038]

**References**

American Diabetes Association. (2011 Jan). Diagnosis and Classification of Diabetes Mellitus. *Diabetes Care* 34:1.

American Diabetes Association. (2011 Jan). Executive Summary: Standards of Medical Care in Diabetes - 2011. *Diabetes Care* 34:1.

American Diabetes Association. (2008). AACC Position on eAG. *Diabetes Care* 31:1473 - 78.