Berkshire Health Systems Laboratories
Berkshire Medical Center
Fairview Hospital

75 Gram Oral Glucose Tolerance Test (non-pregnant)
Patient Preparation and Specimen Collection

ADULTS:

1. The patient must have been on adequate diet of >150 grams of carbohydrates for three days previously. The patient must have nothing by mouth after midnight and the test must be done in the morning. The patient should be instructed not to smoke, drink coffee, or leave the hospital during the procedure. He/she should be asked if he/she is presently taking any of the following medications. If so, this should be noted as a comment in the lab computer with the GTT results.
   - Thiazide Diuretics
   - Dilantin
   - Oral Contraceptives
   - Lithium
   - Cortisone
   - Propranolol

2. Order one of the following tests. If the hours are not specified, order the 2 hour tolerance.
   - GT2: 75 Gram Glucose Tolerance 2 hour
   - GT3: 75 Gram Glucose Tolerance 3 hour
   - GT4: 75 Gram Glucose Tolerance 4 hour
   - GT5: 75 Gram Glucose Tolerance 5 hour

3. A fasting sample of blood is drawn from the patient for a glucose determination. If the glucose result is 126 mg/dl or greater, the GTT should be cancelled, the physician notified and the fasting glucose repeated at another time. A second fasting glucose of 126 mg/dl or greater confirms the diagnosis of diabetes.

4. If the fasting glucose is 125 mg/dl or lower, the patient is given one bottle (300 ML) of Trutol (contains 75 G Dextrose). When the patient has swallowed the last of the dextrose, the time is noted and the succeeding blood samples are collected as noted below.

5. From the time noted take a blood sample at two hours. Additional specimens (e.g. 3, 4, or 5 hours) may be ordered at the discretion of the physician.

6. The blood glucose level of each blood sample is determined.

CHILDREN:

1. Sample conditions pertain to children as to adults.

2. Make the glucose solution in approximately one glass of warm water, but use only 1.75 g/Kg up to a maximum of 75 grams.

3. Blood collections are taken as described for adults.
Reference Ranges, Glucose Tolerance Test (75-gm dose):
Male and Female

<table>
<thead>
<tr>
<th>TEST</th>
<th>AGE</th>
<th>RANGE</th>
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<tbody>
<tr>
<td>GTF</td>
<td>0</td>
<td>70-125</td>
</tr>
<tr>
<td>GTT2</td>
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<tr>
<td>GTT3</td>
<td>0</td>
<td>70-145</td>
</tr>
<tr>
<td>GTT4</td>
<td>0</td>
<td>70-125</td>
</tr>
<tr>
<td>GTT5</td>
<td>0</td>
<td>70-125</td>
</tr>
</tbody>
</table>

ZGT75 – Meditech appends Interpretation Criteria

The ADA revised criteria for the diagnosis of diabetes mellitus are:
1. Typical symptoms of diabetes plus a casual serum glucose greater than 200 mg/dl. “Casual” meaning any random glucose at any time of the day, fasting or non-fasting.
2. A fasting serum glucose (FSG) of 126 mg/dl or greater after no caloric intake for at least 8 hours.
3. A two hour serum glucose of 200 mg/dl or greater during a 75 gram oral glucose tolerance test (OGT).

Any of these findings confirmed on a subsequent day establish a diagnosis of diabetes, and any combination of findings can be used for confirmation. Patients presenting with ketoacidosis or hyperosmolar coma and glucose greater than 200 mg/dl do not require repeat testing.

The Expert Committee recognizes an intermediate group of subjects whose glucose levels, although not meeting the criteria for diabetes, are nevertheless too high to be considered normal. This group with impaired glucose tolerance are defined as those with a FSG > 110 mg/dl but < 126 mg/dl, or a 2 hour value in the OGTT > 140 mg/dl but < 200 mg/dl. It is important to note that the FSG will be assigned an upper limit of normal of 110 mg/dl in order that both impaired and diabetic values will be detected.

REFERENCES: