

GLUCOSE TOLERANCE TEST

PRINCIPLE

A glucose tolerance test measures how well your body is able to break down glucose, or sugar. Those who suffer from type 1 diabetes have trouble processing glucose because the body is not able to make an adequate supply of insulin. This test is also used to diagnose the presence of gestational diabetes and type 2 diabetes. Gestational diabetes is when a pregnant woman who is not a diabetic, has high blood sugar levels as a result of the pregnancy. Type 2 diabetes develops during adulthood, unlike type 1 diabetes, which typically occurs during childhood. Type 2 diabetes is the most common form of diabetes. In this type, your body either doesn't produce enough insulin, the hormone in the body that metabolizes sugar, or the cells in your body are resistant to insulin.

REAGENT

- 50g Glucose Tolerance Test Beverage (Sun-Dex) stored at 2-8°C
- 75g Glucose Tolerance Test Beverage (Limeondex) stored at 2-8°C
- 100g Glucose Tolerance Test Beverage (Limeondex) stored at 2-8°C

PATIENT PREPARATION

Patient must be fasting for the 2 Hour and 3 Hour glucose tolerance tests. Fasting is defined as no consumption of food or beverage other than water for at least 8 hours before testing. The patient should not eat during the test, but may drink water.

SPECIMEN COLLECTION

Specimens are collected in Lithium Heparin (green top tubes) and are stable for 72 hours refrigerated.

PROCEDURE

1 Hour Glucose (Maternal Screen)

1. Give the patient 50g glucose tolerance test beverage. The patient must drink the beverage within 5 minutes.
2. Draw the patient for a glucose 1 hour after finishing the beverage.

2 Hour Glucose

1. Draw the patient for a fasting blood glucose.
2. Give the patient 75g glucose tolerance test beverage. The patient must drink the beverage within 5 minutes.
3. Draw the patient for a glucose 2 hours after finishing the beverage.

3 Hour Glucose (Maternal Screen)

1. Draw the patient for a fasting blood glucose.
2. Give the patient 100g glucose tolerance test beverage. The patient must drink the beverage within 5 minutes.
3. Draw the patient for a glucose 1 hour after finishing the beverage.
4. Draw the patient for a glucose 2 hours after finishing the beverage.
5. Draw the patient for a glucose 3 hours after finishing the beverage.

INTERPRETATION

A glucose above 140mg/dL is considered a high glucose. The physician will look at all the glucose results and interpret if the patient is diabetic or not.

LIMITS OF PROCEDURE

- Instruct the patient that they may feel nauseous or tired during the test.
- If the patient vomits at any time during the testing, the remainder of the test will be cancelled
- The patient can be drawn up to 10 minutes after the indicated time. Any later than 10 minutes and the remainder of the test will be cancelled.

REFERENCES

<http://www.healthline.com/health/glucose-tolerance-test>

