



How to perform a Glucose Tolerance Test Standard Operating Procedure

Version:	Owner:	Created:
1.0	J Godfrey (Lead Nurse CKMP)	Nov 2018
Published:	Approving Director:	Next Review
31/10/2025	Rhys Hancock (Director of Nursing, AHPs and Governance.)	31/10/2026

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What is a Glucose Tolerance test?

The Glucose Tolerance Test (GTT), also referred to as the Oral Glucose Tolerance Test (OGTT), is a method which can help to diagnose instances of diabetes mellitus or insulin resistance. The test is a more substantial indicator of diabetes than finger prick testing.

It involves having a blood test in the morning, when you have not had any food or drink for 8 to 10 hours (though you can usually drink water, but check with the hospital if you're unsure). You're then given a glucose drink.

After resting for 2 hours, another blood sample is taken to see how your body is dealing with the glucose.

The OGTT is done when you're between 24 and 28 weeks pregnant. If you've had gestational diabetes before, you'll be offered an OGTT earlier in your pregnancy, soon after your booking appointment, then another OGTT at 24 to 28 weeks if the first test is normal.

Preparation for the test

The patient should be given 2 appointments on the same day exactly 2 hours apart.

Note: Recent administration of steroids can invalidate the results. If possible, perform test before administration of steroids, or discuss with medical staff whether safe and appropriate to postpone

1. Ask patient to fast for at least 10 hours prior to testing and throughout the duration of the test. Plain water, unsweetened black coffee or unsweetened black tea is allowed in moderation.
2. Advise to rest for 30 minutes before the test and to refrain from smoking or physical activity for the duration of the test.

GTT – On the Day

3. Take 2ml 'fasting' blood sample (grey bottle) labelled with time and 'No.1'.
4. Give 113ml Polycal liquid to drink, mixed with water, to make up to a total volume of 200mls, followed by a further 100ml of water. This is preferably consumed within 10 minutes. This provides a glucose load of 75g.
5. Ensure patient rests and remains nil by mouth apart from sips of water until after the second sample has been taken.
6. Take second 2ml sample (grey bottle) 2 hours later Label with time and 'No 2'.

Results

The current definition of abnormal GTT in pregnancy:

- Fasting blood glucose 5.6mmol/l or more
- 2hrs blood glucose 7.8mmol/l or more

Refer to local guideline 'Glucose Tolerance Test Abnormal Result in Pregnancy' - [Pregnancy and diabetes \(Remedy BNSSG ICB\)](#)

How to perform a Glucose Tolerance Test 1.0

The midwives will then follow up these results

Resources

Current guidelines from UHBW version 3.1 updated 2024



Gestational
diabetes GTT.pdf



9478 - GLUCOSE
TOLERANCE TEST (G

Version Control

Date	Version	Author	Change Details
05/2023	1.0	C Talbot	New Document
06/2025	1.1	S. Mohamed	Full Review
31/10/2025	1.0	JG	Document uploaded as version 1.0