

Hydrogen breath testing



Information for patients

Gastrointestinal Physiology



The aims of this booklet are:

- **To inform and involve you in your care**
- **To explain what happens on the day of the test**
- **To answer any questions you may have about the tests**
- **To explain the preparation instructions that must be followed prior to the tests**

Your consultant has requested that you have tests which will help you to find out the cause of your symptoms.

The test is very simple and involves blowing into a breath sample bag at regular intervals.

It does not test the function of your lungs but measures the gases you breathe out after drinking a sugary solution.

The test may last up to 3 hours and for the duration of the test you will be sat in a room with other patients who are attending for the same test.

It is possible that you have been referred for up to 3 different breath tests which test for different conditions. They will be conducted on separate occasions and will be discussed with you at your first appointment.

What is a hydrogen/methane breath test?

A hydrogen/methane breath test (HMBT) is a simple non-invasive test which can test for conditions such as:

- small intestinal bacterial overgrowth (SIBO)
- lactose and fructose intolerance
- assessing bowel transit time.

The test involves taking an initial sample of your breath and then drinking a sugary drink.

Following the drink we will then take further samples of your breath at regular intervals.

The breath samples are fed into a machine which analyses the gases in your breath and the data will be recorded by a member of staff.

This will be done for up to 3 hours to monitor the gas levels and once the test is complete you will be able to go home.

What are the risks?

The test is very safe, however, it may trigger your usual symptoms that you have been referred for.

What are the alternatives?

It is possible to do gene testing, blood glucose monitoring and biopsy via endoscopy.

However, these are not widely available and HMBT is the simplest, safest, least invasive and most readily available method of diagnosis.

Where do I go?

Breath testing is currently performed on one of the wards away from our main GI Physiology department.

Details of the clinic location are provided on your appointment letter.

Please do not hesitate to call into or contact our main department if you have any problems locating this clinic.

Can I bring my children with me?

It is not appropriate to bring children under the age of 16 into this area without appropriate adult supervision, whilst you undergo your test.

Adult supervision should be provided by someone other than you (the patient), as children will not be allowed to accompany you into the clinical rooms. Staff in the department are unable to care for your child/children.

Given the length of these tests and the limited space in the waiting room, we advise you arrange childcare away from the hospital.

Failure to arrange appropriate childcare may result in the cancellation of your test.

If this is likely to cause you significant difficulties, we kindly ask you to contact the department to arrange a more convenient appointment or discuss your needs.

What should I expect?

On arrival you will be asked to take a seat in the small waiting area.

Once the test is about to start you will be escorted to a separate clinical area.

Firstly, we will use a private area to discuss the test with you, ask about your symptoms and answer any questions you may have. You will then be taken into the breath test room where you will be sat with other people undergoing the same test.

There will be toilet facilities close by and if at any point you need to discuss something privately, please ask a member of staff.

We advise that you bring something to keep yourself occupied for the duration of the test, such as magazines or a book.

You are welcome to bring electronic devices and there is free Wi-Fi available. We kindly ask that electronic devices are used in silent mode or with headphones to ensure they do not disturb other patients.

The Northern General Hospital is a teaching hospital and has a responsibility to ensure that students receive a high standard of training. Occasionally there may be a trainee or assessor observing the tests.

If this is going to happen, we will tell you about it beforehand and it is your right to decline anything that you are not comfortable with.

Preparing for your HMBT

It is very important that you read these preparation instructions carefully, as it is essential that they are followed in order for your test to proceed.

Failure to follow these instructions correctly may result in your test having to be rescheduled.

A member of the team will contact you a few days before your test to go through these instructions and a pre-test questionnaire. This is in preparation for your test and to ensure you understand the instructions. Calls from the hospital will display as a private number.

We are unable to undertake your HMBT if you have had antibiotics, colonoscopy or flexible sigmoidoscopy, or any other bowel preparation within 4 weeks of your test. Please contact us to reschedule your appointment if this applies to you.

Some medications will need to be stopped prior to the test as shown in Table 1 below:

Medication	When to stop taking
Prokinetic agents (metoclopramide, domperidone)	7 days prior
Laxatives (inc. lactulose)	7 days prior
Prucalopride / linaclotide	7 days prior
Loperamide	2 days prior

Table 1

The day before the test

It is very important that you follow a strict diet the day before the test.

Failure to follow the diet may produce results that we are unable to interpret, therefore your test would need to be rescheduled or repeated.

Please **DO NOT** eat any fermentable foods, wholegrain products or dairy products on the day before your test. Examples of foods you can and can't eat are listed in Table 2 below:

Things you can eat & drink	Things you cannot eat and drink
White bread	Pasta
White rice	Fruit
White potatoes (without skins)	Fruit juices
Small amount of eggs	Fizzy drinks
Meat or fish (baked, grilled or boiled and without skins or breadcrumbs)	Vegetables
Water	Dairy products (milk, cheese, butter, yoghurt)
Non-flavoured black tea or coffee	Pulses (such as lentils, beans)
Mayonnaise	Nuts or seeds
	Confectionary

Table 2

It is important that you follow these dietary instructions. Failure to do so may require us to repeat the test at a later date.

An example menu has been provided at the end of this leaflet to help you.

Please do not eat anything from 8.00pm the night before your tests (you may have small sips of water after this time).

You may take your regular medication with a small amount of water, however, please remember to exclude the medications listed in Table 1.

Please do not smoke, use an e-cigarette or perform exercise within 12 hours of your test.

The day of the test

Please do not eat or drink until after your test. This includes chewing gum and breath mints.

Please do not smoke or exercise or take any medication until after the test (you may bring medication with you to take immediately after the test should you need to). You may still use glycerine suppositories to empty your bowels if required. Please clean your teeth thoroughly on the morning of your test and rinse your mouth with water but do not swallow the water.

If you are diabetic, please bring your diabetic medication/insulin and any personal blood glucose monitoring equipment with you. Please contact the department if you have any concerns.

Should you become hypoglycaemic prior to the test and need to eat during the fasting period, it is important that you manage that as you normally would, but contact the department prior to attending for advice. Please contact us if you have any other diabetic concerns.

If you are more than 15 minutes late for your appointment, it may not be possible to see you and your test would have to be rearranged. Please allow plenty of time for parking as it is very limited in and around the hospital. Please also ensure you have the means to pay for parking.

If you are unable to keep your appointment, please make every effort to cancel it in advance so that it can be offered to someone else.

Although it is not necessary for anyone to accompany you, please be aware that if someone does attend with you, it is unlikely there will be space in the test room for them. If you have a medical need for someone to accompany you, please contact the department in advance.

If you have any further questions or concerns, please don't hesitate to contact the department on **0114 271 4293**.

Breath Test Meal Suggestions

This provides meal suggestions for the day before your breath test. Please still refer to the breath test instructions above for dietary advice for the day before your test.

Breakfast

Scrambled egg on white toast **(no butter or milk)** (v)

Bacon sandwich on white bread **(no sauce or butter)**

Plain white toast **(no butter)** (v)

Lunch

White rice with fish **(baked, boiled or grilled)**

Jacket potato with tuna mayo **(don't eat the skin)**

Ham or tuna mayo sandwich on white bread **(no butter)**

Plain omelette **(no milk)** (v)

Tea

Plain homemade burger on a white bun with oven chips **(no sauce or salad)**

Homemade egg fried rice **(just white rice and egg)** (v)

Plain grilled chicken and mash potato **(no butter or coating)**

Plain grilled chicken mayo wrap **(no salad)**

Drinks

Black coffee, non-flavoured black tea or water



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