

Functional Bowel Disease Service

Hydrogen Methane Breath Test

Please read this prior to your appointment

Reference Number: ULHT-LFT-4001 v1

Issued: December 2024

Review Date: December 2026

What is a breath test?

A breath test is a safe and non-invasive test used to make a diagnosis of small bowel bacterial overgrowth. This test can also be used to check for certain intolerances. These intolerances include (Lactose, Fructose and Sucrose). You will be asked to drink a solution on your arrival for the test depending on which you are having. The concentrations of hydrogen and methane are then measured by a breath test machine. High concentrations of hydrogen and/or methane after an overnight fast could suggest a positive test.

Why am I having a breath test?

Bacteria should not be present within the small bowel in a healthy individual, but if you experience symptoms such as abdominal cramps, bloating and longstanding watery diarrhoea, you may have an overgrowth of bacteria in your small bowel. This condition is called small bowel bacterial overgrowth and is commonly associated with previous surgery to the gut, chemo-radiotherapy and diabetes. This test is used to confirm if you have the condition and can be used to check for some intolerances.

What preparation will I need for the breath test?

For the four weeks prior to your breath test appointment it is important that you have not undergone a course of antibiotics or had any bowel preparation for your gut, as this can affect your results. If you have had either of these within this time frame, please contact us and your appointment will be rearranged.

You will be asked to modify your diet (as outlined later in this patient information) to ensure measurements recorded during the breath test are accurate.

It is important that you follow the instructions below very carefully. If these are not followed your procedure may have to be cancelled and rescheduled.

The following food should **NOT** be consumed for 24 hours before the test:

- Canned drinks, carbonated drinks and fruit juices
- Alcohol
- Fruit (including fresh, tinned, stewed, dried, or preserved)
- ALL vegetables except potatoes without skin
- Sweets, chocolate
- Sugar/sweetener
- Marmalade, jam, honey, chocolate spread, peanut butter

- Tomato Ketchup, brown sauce, pickle, chutney, chilli sauce
- Wholegrain cereals eg. Weetabix, all bran, bran flakes, muesli
- Brown rice or pasta
- Wholemeal: bread/rolls/chapattis/rotis/naan
- Lentils, pulses
- Nuts
- Red meat
- Yoghurts
- Probiotic drinks
- Cereals such as bran flakes, all-bran, porridge, muesli, coco pops
- Herbs, spices, sauces, salt and pepper

We understand the list above is very restrictive so we have devised a few examples of what you can eat:

Breakfast:

- White toast with a small amount of butter
- Poached, scrambled or boiled eggs

Dinner:

- Jacket potato (no skin) with a small amount of butter
- Fillings can include cheese or tuna without mayonnaise
- Sandwiches (white bread only)
- Fillings can include cheese, chicken/turkey breast or slices, tuna

Tea:

- Omelette either plain or cheese
- White rice with chicken (no sauce)
- White pasta with chicken (no sauce)
- White rice with fish (no sauce)
- Plain boiled potato with chicken/turkey

12 hours before the test:

- Please do not eat or drink anything except water for 12 hours before the test.
- You can drink water at any time.
- Take your evening medications as usual.

On the morning of your test:

- Please brush your teeth and rinse with mouthwash.
- Unless told otherwise, please **do not** take your usual morning medications. You are advised to bring your medications to hospital so you can take them after your breath test.
- Please **do not** smoke/vape or exercise.
- Please **do not** fall asleep during the test as it can also cause inaccurate breath results.

What if you are diabetic?

If you have type 1 diabetes, please take your normal long-lasting insulin as usual but omit your short-lasting insulin on the morning of your breath test.

If you are type 2 diabetic on insulin treatment and/or tablets, please omit your insulin on the morning of your breath test.

Please bring with you any self-monitoring blood sugar devices to check your sugar levels during the test.

What will happen during the breath test?

You will be asked to take a normal breath, hold your breath for 15 seconds and breathe out at your normal rate into a mouthpiece which is connected to the breath test machine for a baseline measurement.

You will then be given a solution which contains glucose to drink. On occasion, depending on what test has been requested, other solutions such as Lactulose, Fructose, Lactose and Sucrose may be used.

You will then be asked to breathe out into the mouthpiece, in the same way mentioned above, at four 20-minute intervals and then a forty minute interval which may take up to 2 and a half hours.

You will be seated in the waiting area during the test, but you should not sleep, smoke or exercise as this can affect the test results.

You are able to go to the toilet if required during the test.

What happens after the breath test?

You will be allowed to eat and drink as normal.

You are advised to take your morning medications once the test is done.

The gastroenterology doctor who is in charge of your care will notify you of the test results in due course. If the doctor feels you require a further appointment this will be arranged for you. Sometimes a repeat test is required; this is often used to determine if treatment has been successful.

Are there any potential risks or complications involved?

A breath test is a very safe test. Occasionally the glucose solution we give to you on the day can cause worsening of your abdominal symptoms but this should not last long and should settle gradually over a few hours.

Contact details

Any further enquiries, cancellation or rescheduling of your breath test please contact our technicians on the numbers listed below:

(01522) 573393 / 573395 / 597637

Their working hours are Monday to Friday 8.00am to 6.00pm.

United Lincolnshire Teaching Hospitals NHS Trust has worked with AccessAble to create detailed Access Guides to facilities, wards and departments at our sites.

www.accessable.co.uk/united-lincolnshire-hospitals-nhs-trust

United Lincolnshire Teaching Hospitals NHS Trust endeavours to ensure that the information given here is accurate and impartial.

If you require this information in another language or alternative format, please email the Patient Information team at ulth.patient.information@nhs.net