

Information for patients and carers

Hydrogen Breath Test Small Bowel Bacterial Overgrowth

A decorative graphic at the bottom of the page consisting of three overlapping, wavy bands of blue. The top band is a light blue, the middle is a medium blue, and the bottom is a dark blue.

Aims of the leaflet

The leaflet is aimed at people who have bowel symptoms such as diarrhoea or abdominal discomfort who have been advised to have a hydrogen breath test. The leaflet aims to answer any queries you may have regarding the hydrogen breath test.

What is a hydrogen breath test?

A hydrogen breath test is used to detect abnormal growth of bacteria within the small bowel. Bacterial overgrowth can cause a variety of symptoms including diarrhoea, bloating, wind and abdominal cramps.

What causes hydrogen in the breath?

Hydrogen gas in the body is produced by bacteria, normally in the large intestine. The hydrogen is produced through a metabolic fermentation process that converts sugar from carbohydrates into acids, gases and/or alcohol.

Some of the hydrogen produced by bacteria enters the blood stream and is transported to the lungs. It is then exhaled through normal breathing.

What is bacterial overgrowth?

In healthy people large numbers of bacteria live in the large bowel or colon. The small bowel is relatively free of bacteria.

If food is not moving through the small bowel, bacteria may colonise. This is known as bacterial overgrowth and it may interfere with normal digestive function and lead to symptoms such as chronic diarrhoea, flatulence, weight loss and weakness.

How is bacterial overgrowth treated?

The initial treatment is a course of antibiotics. Most patients then remain symptom free. However, some people require a repeat course of antibiotics. A hydrogen breath test may be repeated to check whether the bacteria has been eliminated.

When will I know the results of my hydrogen breath test?

When the test is complete the results of the test will be discussed with you.

Testing For Bacterial Overgrowth

For 6 weeks before your test, you must **not take any antibiotics**. You must also not undergo any tests that requires cleansing of the bowel, such as a colonoscopy/ flexible sigmoidoscopy or barium enema.

For 2 weeks before the test, stop probiotics/prebiotics.

For 48 Hours before the test, do not take any PPI's such as Lansoprazole or Omeprazole. Do not take Gaviscon on the day of the test.

For 24 Hours before the test, do not take any laxatives, stool softeners, stool bulker or Imodium.

The day before the test, follow the dietary advice in this leaflet.

For 12 hours before your test, you must not have anything to eat or drink. For example, if your test is at 8:00am, you should stop eating and drinking at 8:00pm the night before. However, you may continue to take your usual prescription medication with a small amount of water. Alternatively, you can bring you prescription medication with you to take after the test.

The day of your test

You must not eat or drink anything in the morning other than sips of water

Two hours before the test brush your teeth. If you wear dentures, **do not use any fixative materials.**

DO NOT EAT, DRINK, CHEW GUM OR TOBACCO, SMOKE CIGARETTES OR EAT BREATH MINTS BEFORE OR DURING THE TEST.

Your test may last up to 4 hours.

You will first be asked to use a mouth wash followed by providing a breath sample by blowing down a tube into an analyser. You will then be given a drink of lactulose.

An initial breath sample will be collected, then further samples every 15 minutes for approximately 3 - 4 hours.

Under normal circumstances the amount of hydrogen in your breath will remain unaltered as the lactulose is absorbed in the small intestine. However, if you have bacterial overgrowth the lactulose will be digested by the bacteria, producing hydrogen which is released in your breath. If that is the case, we will be able to measure an increase in the hydrogen content of your breath samples. The test is simple and non-invasive but is time consuming so please bring something with you to read.

Providing you have fasted correctly the initial reading should be very low. If the reading is excessively high, we may need to abort the test and rebook for another day.

Diabetic Patients

If you are **diabetic** and require insulin or diabetic pills; and your diabetes is well controlled, take your diabetic medication with your last meal before fasting for the test.

Do not take your **diabetic** medication until the test is complete and you return to eating meals as normal. Ensure you bring your insulin or diabetic tablets with you. Please ensure you bring appropriate food and drinks with you for after your test.

Your blood glucose will be monitored before commencing the hydrogen breath test.

If you are worried about these instructions, it is important that you contact the diabetic specialist nurse who normally supports you with managing your diabetes.

Dietary Advice

Things you can eat and drink		Things you cannot eat and drink	
White bread, white rice, rice crispies	Eggs	Milk & dairy, including butter and margarine	Wholemeal pasta/rice/bread and cereals
Potatoes without skins	Well-cooked soft mashed veg without skins	Raw vegetables	Beans/peas/lentils
Baked or grilled lean meat or fish no skin or batter/Quorn	Clear chicken or beef broth	Sugar/sweeteners/sweets & chocolate	Fruit/dried fruit/prunes/fruit juices
Black un-sweetened tea & coffee	Water	Nuts/seeds	Pickels/chutney/sauces/mayonnaise

Salt and pepper to flavour foods and cooking oil (minimal amounts) are allowed

Meal Suggestions The following are meal suggestions for the day before your test.

Breakfast

Egg on white toast (no butter or margarine)

Plain white toast

Bacon sandwich on a white roll (no butter, margarine or sauce)

Lunch

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

Jacket potato with tuna (do not eat the potato skin)

Plain Chicken or turkey sandwich (no butter or margarine)

Plain omelette

Evening Meal (this must not be a large meal)

Homemade burger on a white bun and oven chips (no sauce or salad)

Grilled chicken and mash potato (no butter or milk)

Homemade egg fried rice

Plain grilled chicken wrap

Drinks

Black, unsweetened tea or coffee

Water

Contact details

Should you require further advice or information please contact:

Radiotherapy Reception **(01772) 522923**

Appointments **(01772) 522931**

Transport **(01772) 522295**

Sources of further information

www.lancsteachinghospitals.nhs.uk

www.nhs.uk

www.accessable.co.uk

www.patient.co.uk

www.lancsteachinghospitals.nhs.uk/veteran-aware

<https://bepartofresearch.nihr.ac.uk/>

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If you want to stop smoking, you can also contact Smokefree Lancashire on Freephone **08081962638**

Please ask a member of staff if you would like help in understanding this information.

This information can be made available in large print, audio, Braille and in other languages.

Our patient information group review our leaflets regularly, if you feel you would like to feedback on this information or join our reading group please contact on email address:

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Department: Radiotherapy

Division: Surgery

Production date: April 2026

Review date: April 2028

Document Code and version: CA258 V2