

# HYDROGEN BREATH TEST

## What is a hydrogen breath test (HBT)?

Hydrogen breath test (or HBT) is a test which is simple, non-invasive and is performed after a short period of fasting. HBT provides information about the digestion of certain sugars or carbohydrates, e.g. milk sugar (lactose) or fruit sugar (fructose). The pattern and quantity of hydrogen produced in your exhaled breath at intervals during the test will help determine if you are intolerant to, or have difficulty in processing or absorbing certain sugars. As about 30% of the population do not secrete hydrogen in measurable quantity, HBT is considered to be the gold standard at present.

## How does it work?

Hydrogen breath test is a simple and useful way of determining if you may be lactose intolerant.

Hydrogen gas in the body is produced from intestinal bacteria. Bacteria, normally in the large intestine, produce hydrogen through fermentation of carbohydrates - such as lactose, fructose and other sugars. Some of the hydrogen produced by bacteria is absorbed by intestinal mucosa into the bloodstream and is transported to the lungs, where it can be detected in the breath.

Normally, such sugars are broken down and absorbed in the small intestine and very little reaches the large intestine to be fermented by bacteria. However, a number of adults develop a reduced ability to process and absorb certain sugars in the small intestine. They are therefore carried forward to the colon where they are metabolised by colonic bacteria producing a large amount of hydrogen gas that is measured in the breath.

## What symptoms might I have to suggest a possible benefit from hydrogen breath testing?

There are a number of digestive symptoms which may arise from the malabsorption of sugars, and consequent production of excessive gas in the large bowel.

### These include:

- Bloating
- Wind
- Abdominal cramping



- Flatulence
- Rumbling
- Loose stools
- Nausea

Some people also report other symptoms, when they eat foods containing sugars which they are unable to digest.

### Some examples include:

- Headache
- Fatigue
- Restlessness or irritability
- Dizziness
- Cold or heat sensations/tingling

## Where can I get this done?

The test is performed in Mediclinic Welcare Hospital, Mediclinic City Hospital and Mediclinic Dubai Mall.

## How is a hydrogen breath test done?

On arrival at the Day Unit, one of the staff will ask you to breathe out into a small computerised device to collect the first breath sample. After drinking the test

sugar solution (e.g. lactose) further breath samples will be collected every 15 to 30 minutes for the next two to three hours, depending on the results or information required. You will be asked to rate your symptoms at the time of each breath sample and these answers will be documented.

#### How long does a HBT breath test take?

The test takes between two and three hours.

#### Are there any risks or side effects?

The test is very safe, and, apart from the possible reproduction of some or all of the above symptoms for a short time, has no significant side effects or risks.

#### How do I prepare for the test?

##### Dinner before the test

- Plain white bread/plain white rice
- Chicken or fish (baked/broiled/grilled)
- Black coffee or tea, (unflavoured) water
- Do not eat, chew or drink for at least 12 hours before the test. **DRINK WATER FREELY**
- Discuss all your prescription medications with your gastroenterologist/physician during your clinic appointment as some medications need to be stopped for some time prior to the test in order to obtain a correct result
- You may continue to take your usual prescription medicines (which are allowed by your physician/ gastroenterologist) with water until 12 hours before the test
- Take no medications on the morning of your test. **IF YOU ARE DIABETIC REQUIRING INSULIN OR DIABETIC PILLS, ASK YOUR PHYSICIAN IF YOU SHOULD CHANGE YOUR MORNING DOSE**
- Two hours before the test, brush your teeth
- **DO NOT EAT, DRINK, CHEW GUM OR TOBACCO,**

**SMOKE CIGARETTES, EAT BREATH MINTS OR CANDY BEFORE OR DURING THE TEST**

- Do not sleep or exercise while the test is being done
- Please empty your bowel prior to attending to the test; this prevents the gas from your intestine interfering with the test results

#### Medications to avoid: please clarify this with your Gastroenterologist

- Antibiotics – for 10-14 days
- Probiotic supplements (Hexbio) – for 10-14 days
- Avoid slowly digesting foods and high fibre foods (e.g. beans, vegetables, bran, coarse breads)
- NO fibre supplements (eg. Metamucil®)
- RESTRICT canned and dried fruit, fruit juices, soft drinks and honey
- NO laxatives

#### When do I get the results?

A full report, including symptom and breath hydrogen analysis and interpretation, will be sent to you and your doctor within one week of the test.

#### What does it mean if the test is positive?

This suggests that some or all of your digestive symptoms may be due to your being unable to process certain sugars adequately in the bowel.

#### What can be done if the test is positive?

The doctor will explain to you the next step as you may need adjustment of diet and a short course of non absorbable antibiotics. You can resume your normal activities and your normal diet after the test.

#### I would like to do a Hydrogen Breath Test (H.B.T.)

Please discuss with one of our gastroenterologists and they will assess if you require one.

**This test is available at the facilities below. Please contact them directly for more information and appointments:**

**Mediclinic Parkview Hospital**  
800 1999

