Women’s & Children’s Hospital

Breath Hydrogen Test for carbohydrate malabsorption

The Breath Hydrogen Test is used to detect carbohydrate malabsorption in the small bowel. The test relies on the hydrogen producing ability of bacteria present in the large bowel. When substrate (carbohydrate) reaches the bacteria due to malabsorption in the small bowel, hydrogen is fermented, absorbed into the bloodstream and released in expired air due to transfer in the lungs.

Conditions
Symptoms of pain, bloating, wind, constipation and/or diarrhoea are commonly present when one or more sugars are malabsorbed.

Sugars tested and suitability
The sugars we test at WCH are:
- **Lactose, fructose and sucrose**
  > Only one test can be done each day.
  > These tests can be requested individually or as a set. If more than one sugar is to be tested it is recommended that a lactulose breath test be performed first.
  > Lactulose is not absorbed therefore hydrogen (H2) producing bacteria present will digest the lactulose and produce H2 which can be detected in the breath.

- **Lactulose (synthetic sugar)**
  > Used to determine whether a patient is a H2 producer (has adequate colonic H2 producing bacteria).
  > This test can also be used to detect for small bowel bacterial overgrowth.

- **Lactose (sugar in dairy food)**
  > To detect incomplete absorption of lactose in the small intestine.

- **Fructose (sugar in fruits, fruit juice, soft drinks and some prepared foods)**
  > To detect incomplete absorption of fructose in the small intestine.

- **Sucrose (table sugar)**
  > To detect incomplete absorption of sucrose in the small intestine. Sucrose malabsorption can also be an indicator of gut damage.

Preparation and testing
- > Fast for a minimum of 10 hours (sips of water allowed)
- > Infants fast for a minimum of six hours
- > No antibiotics for four weeks prior to testing
- > No bowel cleanouts or probiotics for two weeks prior to testing
- > No exercise or smoking is allowed the morning of or during the test
- > A low fibre diet for one day before the test

FOODS TO AVOID
brown/wholemeal foods
legumes, corn, nuts, honey
onions/garlic, celery, broccoli, cabbage
dried fruit, stone fruit, canned fruit
pears, avocado
fibre supplements and laxatives
soft drinks, sports drinks, juice, cordial
fermented foods, yoghurt, soy products

> After a baseline breath sample and ingestion of the test drink, breath samples are taken periodically for up to three hrs

APPOINTMENTS
Appointments will only be made after sighting a signed doctor’s referral (original, faxed or via email).

Breath tests incur a cost.

The Gastroenterology Unit is located on the 8th floor, Zone B (Rieger Building) at the WCH.

Patients must bring a doctor’s referral and their Medicare card to the appointment.

For more information and for bookings
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