

HYDROGEN & METHANE BREATH TEST RESULTS

Date: 14 July 2023
Practitioner: Mr Luke Clarke
Patient Details: Danny Peraic

Fax: Email Results
Patient DOB: 02/11/72

TEST	DATE	TIME 0min	30min	60min	90min	120min	150min	180min	SYMPTOMS *
Lactulose									
H ₂ (ppm)	28/06/23	4	8	17	27	31	20	25	
CH ₄ (ppm)		8	12	19	20	29	20	21	
Fructose									
H ₂ (ppm)	30/06/23	7	7	58	38	14	5	4	
CH ₄ (ppm)		7	7	23	18	10	7	7	
Glucose									
H ₂ (ppm)	1/07/23	10	14	11	N/A	11			
CH ₄ (ppm)		10	14	11	N/A	11			

CONCLUSIONS:

This lactulose test confirms the production of hydrogen thereby validating future hydrogen breath tests. The oro-caecal transit time is approximately 60 minutes. Early rise in breath hydrogen may be seen with rapid gut transit or small intestinal bacterial overgrowth. Lactulose is superior to glucose in detecting distal small intestinal bacterial overgrowth.

Positive for fructose malabsorption.

This glucose test is not consistent with small intestinal bacterial overgrowth. Glucose is superior to lactulose in detecting proximal small intestinal bacterial overgrowth.

* **SYMPTOMS:** 1. Abdominal bloating 2. Abdominal pain 3. Flatulence 4. Diarrhoea

Symptoms experienced post-test not recorded here. **Note:** intolerance is malabsorption *with symptoms*.

Hydrogen (H₂) and Methane (CH₄) gases are measured on all breath samples, guided by Carbon Dioxide (CO₂) concentration for quality assurance. The type of gas produced simply reflects the patient's gut microbiota. False negatives may occur if there is recent history of antibiotics or colonoscopy.

INTERPRETATION OF HYDROGEN/METHANE BREATH TEST RESULTS:

Baseline: H₂ and CH₄: 0min or 30min value (whichever is lowest).

SMALL INTESTINAL BACTERIAL OVERGROWTH (SIBO):

Lactulose: ≥10ppm above baseline in first 60mins may be seen with small intestinal bacterial overgrowth.

Oro-caecal transit time is indicated by ≥10ppm rise after lactulose challenge. Normal oro-caecal transit time in healthy adults is 90-120min.

Glucose: ≥12ppm above baseline may be seen with small intestinal bacterial overgrowth.

SUGAR MALABSORPTION:

Methane gas only: unequivocally positive: 12ppm above baseline.

Hydrogen gas only: unequivocally positive: 20ppm above baseline.

As a guide only, an increase of 20-40ppm above baseline indicates mild malabsorption, 40-80ppm moderate malabsorption, and >80ppm severe malabsorption.

High baselines >30ppm may suggest incorrect test preparation or SIBO.

N/A = invalid or missing sample.

Results reviewed by supervising pathologist before report issued – VIC • NSW • ACT • QLD • SA • WA

Results are to be interpreted along with patient clinical details. Specialist dietary advice may assist management.