



Bacterial Overgrowth of the Small Intestine

Breath Test



63 Zillicoa Street
Asheville, NC 28801
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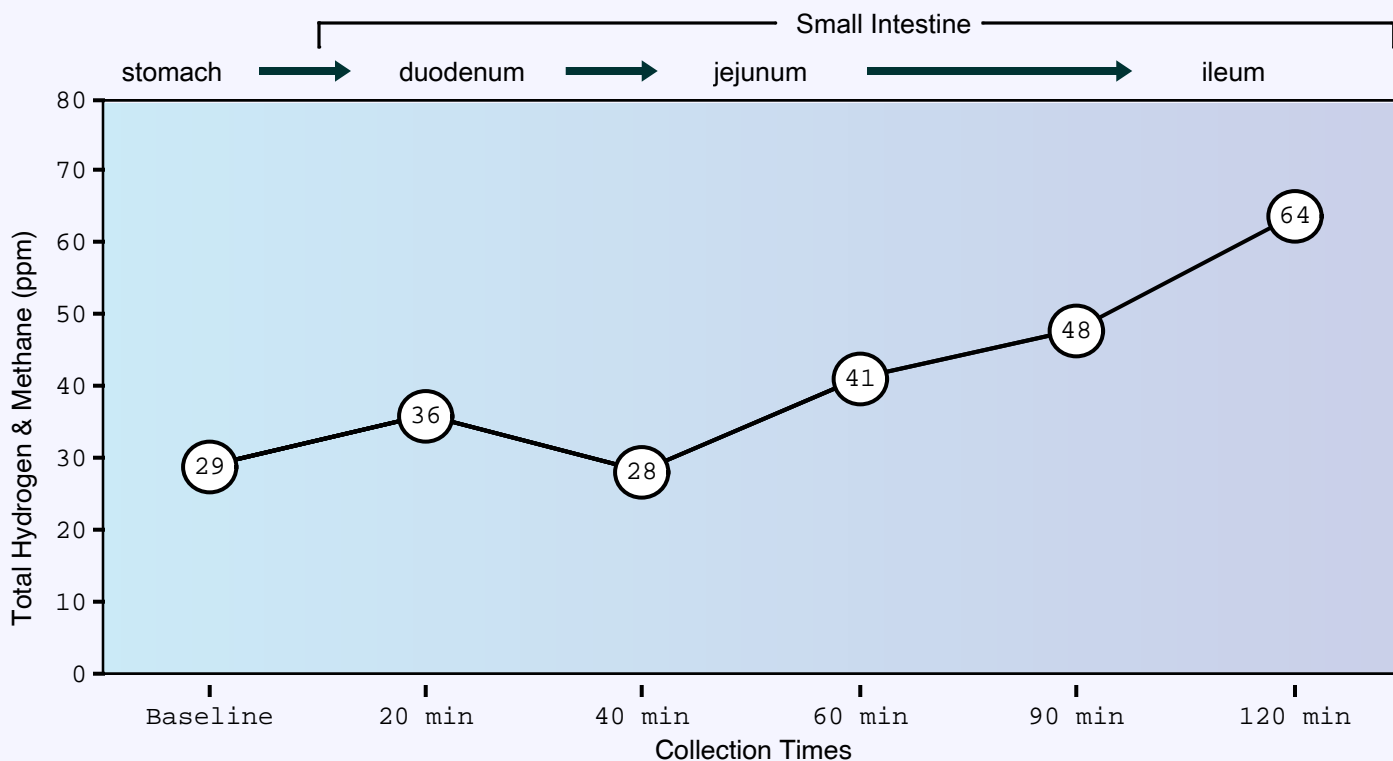
Patient: [REDACTED]
DOB: [REDACTED]
Sex: F
MRN: 1232520198

Order Number: I7010988

Completed: July 07, 2015
Received: July 01, 2015
Collected: June 30, 2015

[REDACTED]
[REDACTED]
[REDACTED]
Canada

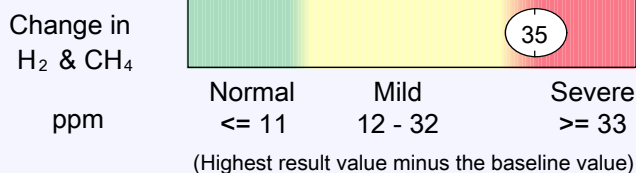
Total Hydrogen and Methane Breath Gases



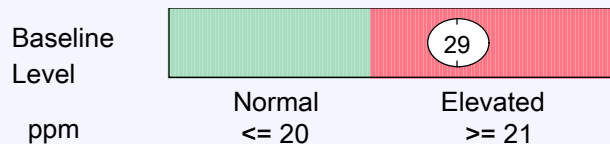
Hydrogen & Methane (ppm)

Minutes	Base-line	20	40	60	90	120
Hydrogen (H ₂)	5	7	2	12	29	42
Methane (CH ₄)	24	29	26	29	19	22
Total	29	36	28	41	48	64

Increase over Baseline



Baseline Evaluation



This test was developed and its performance characteristics determined by Genova Diagnostics, Inc. It has not been cleared or approved by the U.S. Food and Drug Administration.

Commentary

Methodology: GC-TDC/SSS

Commentary is provided to the practitioner for educational purposes, and should not be interpreted as diagnostic or treatment recommendations. Diagnosis and treatment decisions are the responsibility of the practitioner.

Bacterial Overgrowth of the Small Intestine

Few bacteria normally inhabit the small intestine, compared to the ample growth found in the colon. If bacteria are excessive in the small intestine, they will ferment the lactulose challenge drink and produce hydrogen and/or methane gas(es), which are absorbed into the bloodstream and then released into the breath. An early rise in breath gases, within the first hour or so after lactulose ingestion, typically indicates bacterial overgrowth in the proximal small intestine. The earlier the peak, the higher in the small intestine the overgrowth is likely to be.

An increase in breath gases in the 5th or 6th specimen (90 and 120 minutes, respectively) usually reflects bacterial overgrowth in the distal ileum.

Your results:

Your breath test for bacterial overgrowth showed a net increase in total breath gases of >32 ppm. This amount of increase in breath gases suggests severe bacterial overgrowth of the small intestine. Treatment with antimicrobials may be indicated, depending on the clinical picture. Common signs and symptoms include gas and bloating, diarrhea, abdominal cramps, steatorrhea, malabsorption, and nutrient insufficiencies, particularly vitamin B12. Causes include achlorhydria or hypochlorhydria (absent or low stomach acid), chronic maldigestion, reduced transit time, Crohn's disease, diabetes mellitus, and intestinal stasis from various causes.

An elevated level of breath gases prior to the ingestion of lactulose may result from incomplete avoidance of high-fiber foods, residual fiber in the intestine due to delayed transit time, residual oropharyngeal (mouth and throat) bacteria, exposure to tobacco smoke or napping during collection, or may confirm bacterial overgrowth of the small intestine, particularly if elevated methane predominates.