SIBO
CENTER FOR DIGESTIVE HEALTH™
NCNM CLINIC

Test Results

NCNM Clinic Lab
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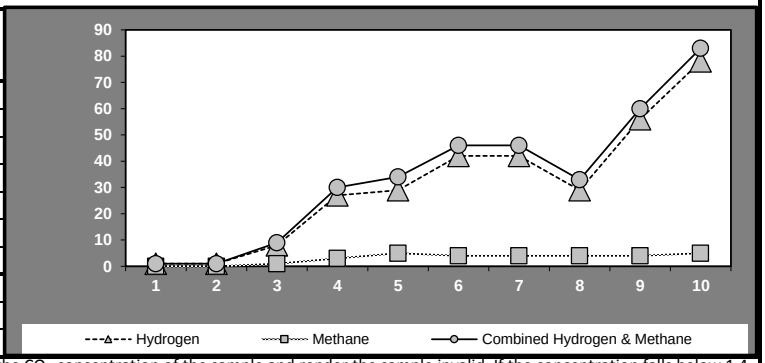
Patient Name: SAMPLE REPORT **DOB:** 1/1/1960 **Provider:** Last, First

Date Collected: 1/1/2016 **Date Received in Lab:** 1/4/2016 **Date Tested:** 1/6/2016 **Tech:** XX

Data

H_2 = Hydrogen CH_4 = Methane CO_2 = Measured

	Sample	ppm H_2	ppm CH_4	Total H2 + CH4	CO_2 %*
1	Baseline	1	0	1	OK
2	20 min	1	0	1	OK
3	40 min	8	1	9	OK
4	60 min	27	3	30	OK
5	80 min	29	5	34	OK
6	100 min	42	4	46	OK
7	120 min	42	4	46	OK
8	140 min	29	4	33	OK
9	160 m	56	4	60	OK
10	1 m	78	5	83	OK



*Dilutions of the sample may occur during the sampling procedure which may decrease the CO_2 concentration of the sample and render the sample invalid. If the concentration falls below 1.4 %, the entry for CO_2 will be marked as Not Sufficient (QNS) and the entries for H_2 and CH_4 will be highlighted. If the sample is otherwise unusable the entry for CO_2 will be marked as Not Available (N/A) and the entries for H_2 and CH_4 will be highlighted. See notes section for details if cells are highlighted and blank or highlighted and contain N/A or QNS.

Analysis

	Result	Flag	Normal
Combined baseline total =	1	-	≤20ppm
Greatest H_2 increase over the lowest preceding value within first 120 minutes =	41	H	≤20ppm
Greatest CH_4 increase over the lowest preceding value within first 120 minutes =	5	-	≤12ppm
Greatest combined H_2 & CH_4 increase over the lowest preceding value within first 120 minutes =	45	H	≤15ppm

Interpretation

SIBO Suspected - Elevated Hydrogen	Increases of hydrogen greater than 20ppm over the lowest preceding value within the first 120 minutes (+/- 5min deviation) are indicative of bacterial overgrowth.	**POSITIVE**
SIBO Suspected - Elevated Methane	Increases of methane greater than 12ppm over the lowest preceding value within the first 120 minutes (+/- 5min deviation) are indicative of bacterial overgrowth.	**NEGATIVE**
SIBO Suspected - Elevated Combined Hydrogen & Methane Gasses	Increases in combined hydrogen and methane gas values greater than 15ppm over the lowest preceding value are indicative of bacterial overgrowth.	**POSITIVE**

Notes

Any symptoms experienced during the test should be reported to the provider.

SAMPLE REPORT

Additional Information

High Baseline: Some doctors interpret a baseline gas above normal value as positive. This is particularly true for methane since a high baseline and an early rise is a standard methane pattern.[1,2,3] Gas levels that fall after an elevated baseline and continue to reduce or remain low during the first two hours, may indicate an improper preparation diet.[4]

Methane ≥ 3ppm: Some doctors interpret methane ≥ 3ppm at any point in the test as positive.[5] Levels of methane that are greater than or equal to 3ppm at any time during the test are indicative of methanogen overgrowth which has been correlated in studies to IBS constipation type and chronic constipation.[6]

Level vs. Increase: The standard interpretation of results used by the NCNM SIBO Lab is based on the manufacturer's recommendations, which uses the difference between the peak level compared to the lowest previous level in the first 120 minutes (+/- 5 min deviation). If this increase is greater than 20 PPM for H_2, or greater than 12 PPM for CH_4 – SIBO is suspected. SIBO is also suspected if the increase in the combined hydrogen and methane gas value is greater than 15ppm over the lowest preceding value. At the NCNM SIBO center, we have also used an absolute value (rather than an increase) of 20 PPM (H2) or 12 PPM (CH4) to indicate SIBO. Also note that methane values may not increase, the baseline and all levels often remain high for the whole test.[7,8]

References: 1.Perman JA, Modler S, Barr RG, Rosenthal P. Fasting breath hydrogen concentration: normal values and clinical application. Gastroenterology. 1984;87(6):1358-63.. Pub Med ID#: 6489700 2. Quigley EM, Quera R. Small intestinal bacterial overgrowth: roles of antibiotics, prebiotics, and probiotics. Gastroenterology. 2006 Feb;130(2 Suppl 1):S78–S90. Pub Med ID#: 16473077 3. Pimentel M, Lin HC, Enayati P, van den Burg B, Lee HR, Chen JH, Park S, Kong Y, Conklin J. Methane, a gas produced by enteric bacteria, slows intestinal transit and augments small intestinal contractile activity. Am J Physiol Gastrointest Liver Physiol. 2006 Jun;290(6):G1089-95. Pub Med ID#:16293652 4. Siebecker A, Sandberg-Lewis S. The Finer Points of Diagnosis, Test Interpretation, and Treatment, Naturopathic Doctor News and Review, January 2014, 10:46. http://ndnr.com/gastrointestinal/sibo/ 5. Pimentel M. SIBO Symposium: Current Perspectives and Management in IBS. National College of Natural Medicine. January 18-19, 2014. Webinar recording: http://www.ncnm.edu/cemoodle/course/category.php?id=130 6. Use studies already listed 7. Pimentel M. An evidence-based treatment algorithm for IBS based on a bacterial/SIBO hypothesis: Part 2. Am J Gastroenterol. 2010 Jun;105(6):1227-30. PMID: 20523308 8. Siebecker A, Sandberg-Lewis S. The Finer Points of Diagnosis, Test Interpretation, and Treatment, Naturopathic Doctor National Review, January 2014, 10:46. http://ndnr.com/gastrointestinal/sibo/