

Hydrogen Breath Testing

Date of Origin: 03/27/2019

Last Review Date: 09/27/2023

Effective Date: 10/01/2023

Dates Reviewed: 03/25/20, 10/2021,09/2022, 09/2023

Developed By: Medical Necessity Criteria Committee

I. Description

Hydrogen breath testing (HBT) involves measuring breath hydrogen (H₂) before and at timed intervals after ingesting a solution containing lactose. The individual blows into balloon-like bags from which the exhaled breath is tested for the presence of H₂. The exhalations are captured and tested every 15 minutes during a 2-hour testing period. Normally, very little H₂ is detected in exhaled breath; however, when undigested lactose becomes fermented in the colon, H₂ is produced. Raised levels of H₂ found in exhaled breath may aid in the diagnosis of lactose intolerance or deficiency.

II. Criteria: CWQI HCS-0250

- A. OHSU Health Services considers Hydrogen Breath Testing (HBT) medically necessary for evaluation of suspected lactose intolerance/deficiency after a 2-week trial of lactose-free diet and symptoms of lactose intolerance persist.
- B. OHSU Health Services considers HBT experimental or investigational because of insufficient evidence of its effectiveness for all other indications including, but not limited to:
 - a. Irritable bowel syndrome (IBS)
 - b. Small intestinal bacterial overgrowth (SIBO)
 - c. Small bowel transit time/gastroparesis

III. Information Submitted with the Prior Authorization Request:

- 1. Chart notes from treating physician documenting 2-week trial of lactose-free diet and symptoms of lactose intolerance persist

IV. CPT or HCPC codes covered:

Codes	Description
91065	Breath hydrogen or methane test (e.g., for detection of lactase deficiency, fructose intolerance, bacterial overgrowth, or oro-cecal gastrointestinal transit

82542 (companion code- see primary code)	Column chromatography includes mass spectrometry, if performed (e.g. HPLC, LC, LC/MS, LC/MS-MS, GC, GC/MS-MS, GC/MS, HPLC/MS), non-drug analyte(s) not elsewhere specified, qualitative or quantitative, each specimen
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V. CPT or HCPC codes NOT covered:

Codes	Description
	Gastric emptying breath test (GEBT) E and I (no specific code)
	Exhaled breath temperature E and I (no specific code)

VI. Annual Review History

Review Date	Revisions	Effective Date
03/27/2019	New criteria	06/01/2019
03/25/2020	Annual Review: No content changes	04/01/2020
10/27/2021	Annual Review: No content changes	11/01/2021
09/28/2022	Annual Review: No changes	10/01/2022
09/27/2023	Annual Review: No changes	10/01/2023

VII. References

- Centers for Medicare and Medicaid Services (CMS). National coverage determination (NCD) for diagnostic breath analyses (100.5). <https://www.cms.gov>. Published June 12, 1984. Accessed January 28, 2019
- Lab Tests Online. Lactose tolerance. <http://www.labtestsonline.org>. Updated December 26, 2018. Accessed January 28, 2019
- Pimentel N. Breath testing for small intestinal bacterial overgrowth: Should we bother? Am J Gastroenterol. 2016;111(3):307-308
- Rezaie et al, 2017; Hydrogen and Methane-Based Breath Testing in Gastrointestinal Disorders: The North American Consensus. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5418558/pdf/ajg201746a.pdf>

Appendix 1 – Applicable Diagnosis Codes:

Codes	Description

Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determination (NCD) and Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable. They can be found at: <http://www.cms.gov/medicare-coverage-database/search/advanced-search.aspx>. Additional indications may be covered at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes (applicable to existing NCD/LCD):

Jurisdiction(s): 5, 8	NCD/LCD Document (s):

NCD/LCD Document (s):

Medicare Part B Administrative Contractor (MAC) Jurisdictions		
Jurisdiction	Applicable State/US Territory	Contractor
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC