

Overview of Breath Test

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DESCRIPTION

A breath test is a sort of test that uses air that is formed during breath. Types of Breath Tests include: Breathalyzer, Hydrogen breath test, urea breath test, Exhaled nitric oxide

A breathalyzer is a device that uses a breath sample to determine Blood Alcohol Content (BAC) and to identify diseases, illnesses, and various types of meat. The term is a genericized trademark of inventor Robert Frank Borkenstein's Breathalyzer line of instruments. Breath analyzers cannot directly assess blood alcohol content or concentration; hence a blood sample must be analyzed. Instead, they measure the amount of alcohol in one's breath to estimate BAC indirectly. There are two types of breathalyzers that are commonly utilized. The most common breathalyzer technologies utilized in desktop analyzers are infrared spectrophotometer technology, electrochemical fuel cell technology, or a combination of the two. Hand-held field testing devices based on electrochemical platinum fuel cell analysis may be used by officers in the field as a form of "field sobriety test," also known as "preliminary breath test" or "preliminary alcohol screening," or as evidential devices in point-of-arrest testing, depending on jurisdiction.

A hydrogen breath test is used to detect bacterial overgrowth in the small intestine as well as carbohydrate malabsorption, such as lactose, fructose, and sorbitol intolerance. The test is simple and painless, and it is performed after a short fast (typically 8–12 hours). The fact that humans have no other source of hydrogen gas than bacterial carbohydrate metabolism is the basis for hydrogen breath testing. Despite the fact that the test is

commonly referred to as "hydrogen" breathe test, some doctors may also test for methane. Many investigations have found that some patients (about 35 percent or more) generate methane rather than hydrogen. Some people produce a mixture of the two gases. Other patients, termed as "non-responders," do not create any gas; it is unknown whether they will release another gas in the future. Some facilities use carbon dioxide (CO₂) in the patient's breath in addition to hydrogen and methane to detect if the breath samples being tested are polluted (either with room air or bronchial dead space air)

The urea breath test is a quick way to find out if you have *Helicobacter pylori*, a spiral bacterium that causes gastritis, stomach ulcers, and peptic ulcer disease. It relies on *H. pylori*'s capacity to convert urea to ammonia and carbon dioxide. Leading society guidelines advocate urea breath tests as the primary non-invasive method for detecting *H. pylori* before and after treatment.

Exhaled nitric oxide (eNO) can be quantified in a breath test for asthma and other airway inflammation-related diseases. During an inflammatory reaction, various cell types create nitric oxide (NO), which is a gaseous chemical. In adults and children with asthma, the percentage of exhaled NO (FENO) is a promising biomarker for diagnosis, follow-up, and therapeutic guidance. Although its specific significance is unknown, the breath test has lately become available in many well-equipped hospitals in developed regions. Breath tests for diseases have been created as an alternative to existing medical tests for early identification of Lung Cancer, Breast Cancer, Pulmonary TB, and many other disorders.

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