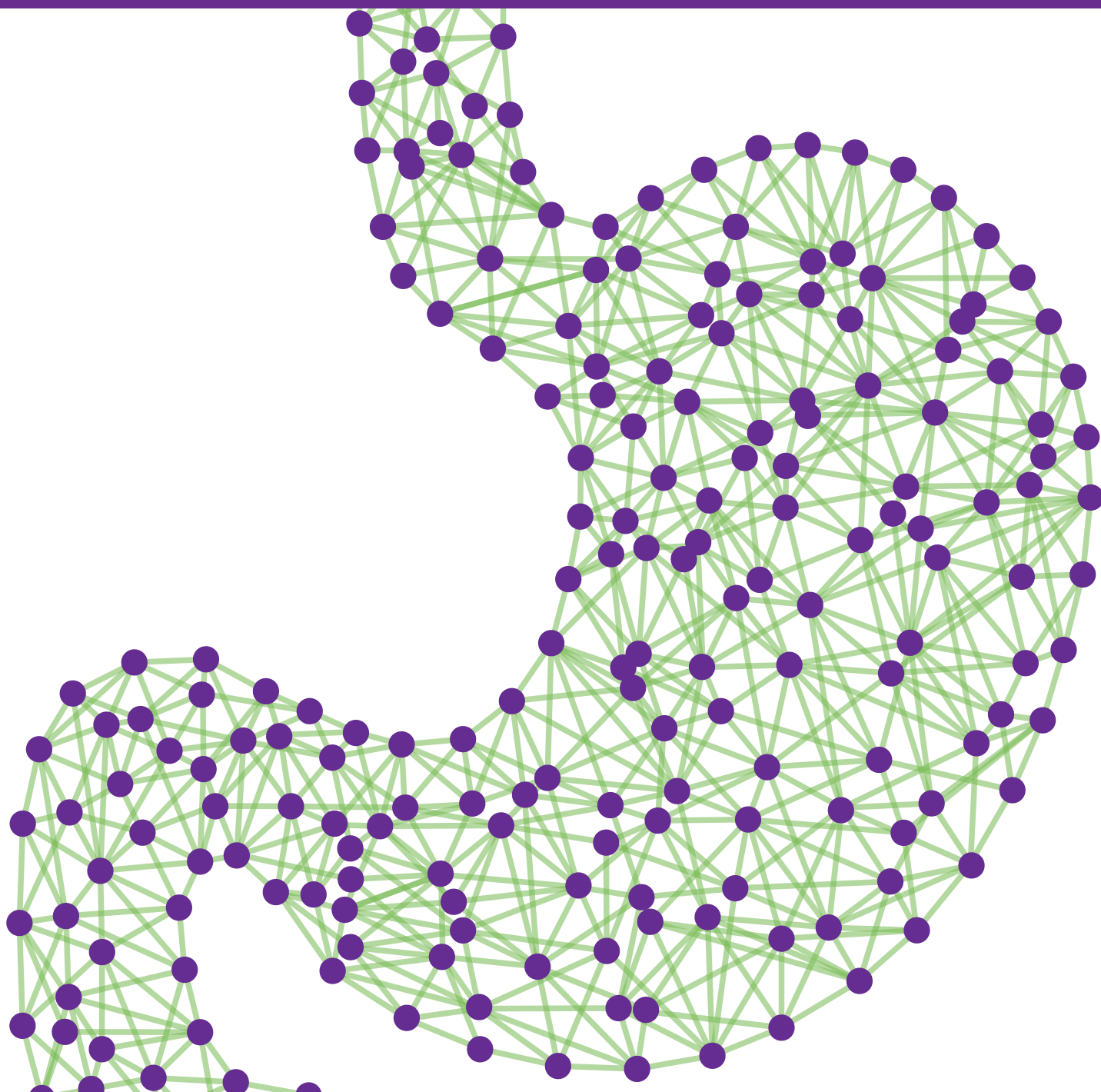




¹³C-SPIRULINA GASTRIC EMPTYING BREATH TEST

A rapid, more convenient test to aid in the diagnosis of gastroparesis.



■ Standardized ■ Non-Invasive ■ FDA Approved ■ Telehealth

Gastroparesis is characterized by delayed gastric emptying in the absence of a mechanical obstruction in the stomach and may cause nausea, vomiting, early satiety and other upper gut symptoms.

Historically, delayed gastric emptying has been confirmed using gastric emptying scintigraphy (GES). This procedure can be costly and must be performed in specialized nuclear medicine centers. It also exposes the patient to radiation emitting compounds.

Diagnosis of gastroparesis is often delayed until other gastrointestinal conditions are ruled out. Scintigraphy may not be recommended until patients are referred to a specialist and not all patients have easy access to scintigraphy.

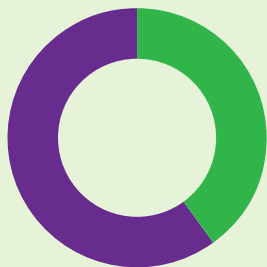
A NEW, MORE DIRECT PATH TO DIAGNOSIS

The Cairn ^{13}C -Spirulina Gastric Emptying Breath Test (GEBT) is the only FDA-approved breath test to aid in the definitive diagnosis of gastroparesis.

Because it does not require imaging equipment, specialized training in radiation safety and handling radioactive materials, the Cairn GEBT can be administered in any clinical setting or in a patient's home under virtually supervised telehealth. Validated against the method of 4-hour gastric scintigraphy, the test enables rapid and accurate identification of gastroparesis by avoiding the need for expensive, time-consuming referrals.

More than 60%

of **untested patients** are **treated** for **gastroparesis without** receiving a **definitive diagnosis**, despite the fact that the **leading drug therapy** has a **black box warning**.



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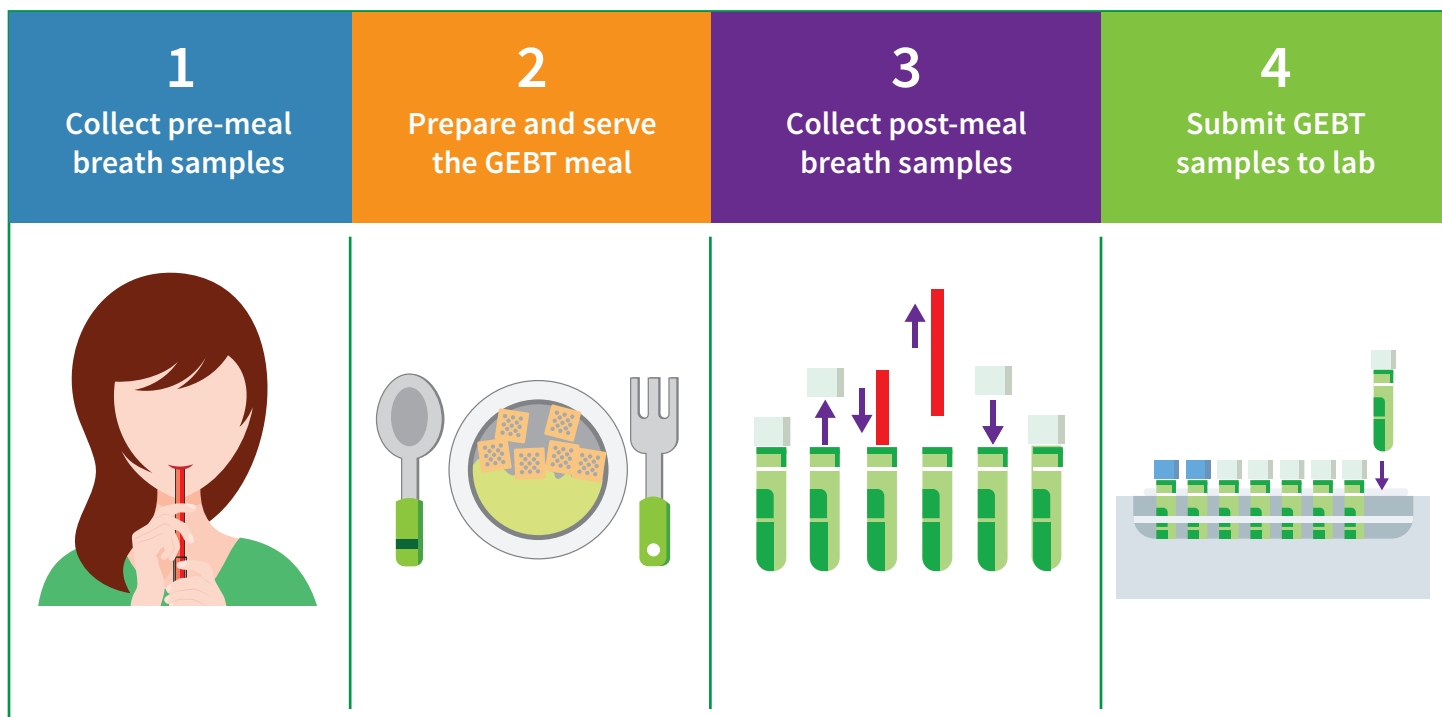
The Cairn GEBT is convenient to administer either in clinic or at home. The kit contains a specially formulated meal of powdered scrambled eggs containing pharmaceutical-grade spirulina. The spirulina has been enriched with a safe, non-radioactive and naturally occurring form of carbon (^{13}C).

The labeled by-products of ^{13}C -Spirulina (proteins, carbohydrates and fats) are absorbed and metabolized, giving rise to ^{13}C -labeled carbon dioxide which is excreted in the breath.

Before and after eating the test meal, breath samples are collected from the patient. Samples are sent to Cairn's CLIA-certified laboratory for analysis by gas isotope ratio mass spectrometry (GIRMS).

The rate of $^{13}\text{CO}_2$ excretion is proportional to the rate of gastric emptying at each of 6 measurement times. A patient gastric emptying report with this data is prepared by Cairn's laboratory and returned to the physician.

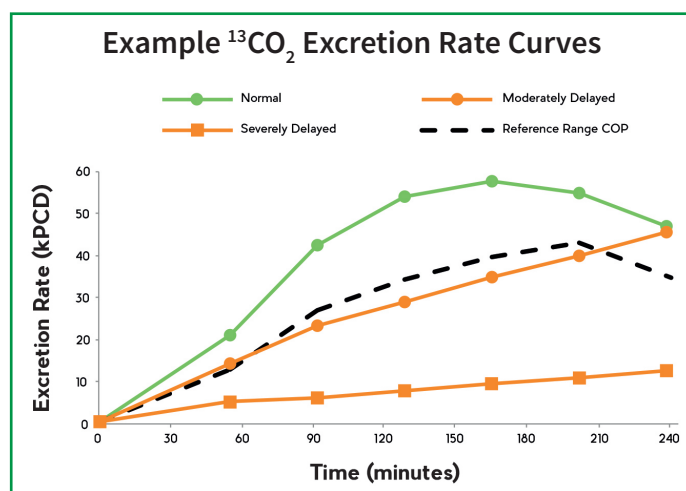
THE GEBT IS ADMINISTERED IN AN EASY 4 STEP PROCESS



COMPREHENSIVE, QUANTITATIVE EASY-TO-INTERPRET RESULTS FOR A DEFINITIVE DIAGNOSIS

The gastric emptying rate is reported at 6 separate time-points plotted over the 4-hour evaluation period. The degree of the delay can be discerned from the graphical display provided on the report .

Test results show extent of delay from moderate to severe. Patients with **normal** rates of gastric emptying typically display $^{13}\text{CO}_2$ excretion rates that exceed cut-off points, reach a maximum between 120 – 180 minutes and then decline. Patients with **delayed** rates of gastric emptying (from moderate to severe) do not decline; they display lower $^{13}\text{CO}_2$ excretion rates, typically (but not always) lower than the cut-off points, rise continuously over time and characteristically exhibit maximum $^{13}\text{CO}_2$ excretion at 240 minutes.



Test with confidence. The Cairn GEBT is a safe, accurate, and convenient measurement of solid phase gastric emptying.



PROVEN

FDA-approved and validated against 4-hour gastric scinigraphy



SAFE ALTERNATIVE

Non-invasive and no radiation exposure



RELIABLE

Breath samples analyzed in CLIA-certified lab



CONVENIENT

Easy to administer in a doctor's office or at home via telehealth



TRUSTED

Included in Expert Consensus and ACG and AGA Guidelines

ABOUT CAIRN® DIAGNOSTICS

For many patients and physicians, the pathway to a definitive diagnosis can be complex, slow and frustrating.

At Cairn Diagnostics, our mission is to develop tests that eliminate complexity and create a safer, faster and clearer path to diagnosis.

Use of our proprietary and validated analytical methods allows us to create diagnostic tests that are user- and patient-friendly and easy to administer, yet powerful in their ability to deliver a definitive diagnosis.



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