

Leyla Weighs In: Hemoglobin A1c vs. Glycomark: A tale of two tests



You've heard me touting the benefits of the gold standard glucose tolerance test (GTT). Another test we've relied on to determine blood sugar values is the Hemoglobin A1c (HgbA1c). The HgbA1c is a marker of average blood glucose over a three-month period. But since it's only an average, it does not detect variability in blood sugar ranges over the course of days. This may explain the discrepancies I've observed over the years between the A1c and GTT.

For instance, a patient can have an A1c of, say, 5.2—well within the normal range—but will show impaired glucose tolerance on the GTT—indicating hyperglycemia (high blood glucose). The A1c doesn't capture this important information.

Enter the Glycomark. This test measures a specific molecule in the blood called 1,5-anhydroglucitol which reliably measures peaks in blood sugar over the most recent one-to-two-week period. Because it's possible to have a completely normal A1c and still have high blood sugar levels, I'm finding the Glycomark test more helpful in revealing unstable blood sugar and hyperglycemia.

Here's a case study to illustrate this: A 45-year-old obese male has an A1c of 5.0, deemed perfect by most endocrinologists, but his Glycomark is a 4.9 (abnormal is < 8 mcg/mL), indicating "significant glycemic variability likely due to after-meal blood sugar levels reaching above 180 mg/dL." By identifying recent occurrences of blood sugar variability, this deems the specificity of the Glycomark to be superior in capturing true pictures of blood sugar swings.

I would encourage anyone with blood sugar issues such as prediabetes, metabolic syndrome, and diabetes to share this information with their doctor or endocrinologist.

To your health!