

Estimated Average Glucose (eAG)

Chronic glycemia is usually expressed as a percentage of hemoglobin that is glycosylated, whereas day to day monitoring and therapy of diabetes is based on acute glucose levels expressed as milligrams per deciliter. A recent trial, the A1c-Derived Average Glucose (ADAG) Trial[#], correlated the HbA1c values to an estimate of average glucose (eAG) by way of calculation. Using eAG may enhance the diabetes education process by focusing on a single set of values for both daily glucose checks and long term control.

The relationship between % HbA_{1c} and the estimated average glucose derived from the A1c-Derived Average Glucose (ADAG) Trial.

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HbA_{1c} %	Estimated Average Glucose (mg/dL)[#]
6	126
6.5	140
7	154
7.5	169
8	183
8.5	197
9	212
9.5	226
10	240
11	269
12	298

HbA_{1c} results and calculated eAG values will be reported together on patient lab reports. However, patients should understand that the eAG value is unlikely to match the average glucose value shown on their personal meter. Since, people with diabetes are more likely to test more often when their blood glucose levels are low – first thing in the morning, and before meals – the average of these readings on their meter is likely to be lower than their eAG, which represents an average of their glucose levels 24 hours a day, including post-meal periods of higher blood glucose when people are less likely to test. One advantage of using eAG as a measure of glucose control is that it will help patients more directly see the difference between their individual meter readings and how they are doing with their glucose management overall.

[#] Diabetes Care 2008;31:1473-1478.