

# HEMOGLOBIN A1C

*This information is provided for informational purposes only and is not intended to diagnosis, treat, cure, or prevent disease. Abnormal test values falling outside the Normal Range will be printed in bold and noted in the "Flag" column. Abnormal values should be reviewed by your primary physician and a copy of all testing should be included in your medical record for future reference and comparison.*

In persons who have diabetes and pre-diabetes (also known as "borderline" diabetes), the fasting blood sugar concentration is elevated. Over time this results in damage to the kidneys, eyes, nerves, and blood vessels. It is estimated that half of the 17 million diabetics in this country are unaware that they have this deadly disease.

The American Diabetes Association recommends that all abnormally high blood sugar tests (taken while fasting) be followed up with more detailed testing for a definitive diagnosis. When sugar becomes chemically bound to hemoglobin in the blood, a compound called Hemoglobin A1C (glycohemoglobin) is formed. Determining the level of Hemoglobin A1C provides a measure of the degree of control the patient has over their diabetic condition. Additionally, the test provides an estimate of the average blood sugar concentration over the previous 90 to 120-day period. This is called the Mean Plasma Glucose (MPG). Historically, this test has been used to manage the long-term treatment of known diabetics and is used as an indicator of diabetic control. The A1C is also useful in identifying undiagnosed diabetics in the non-fasting environment commonly encountered at employee health fairs.

Hemoglobin A1C levels of 4.5% to 5.7% are considered normal. The A1C goal for people with diabetes is less than 7%. A change in a patient's treatment plan is almost always needed if the test result is over 8%. If patients can lower their HbA1c numbers by any amount, they will improve their chances of staying healthy.

People diagnosed as having diabetes should get the HbA1c test at least two times a year if their blood sugar is in the target range and stable. If they are taking insulin, if their treatment changes or if their blood sugar stays too high, they should get the HbA1c test at least every 3 months until their blood sugar level improves