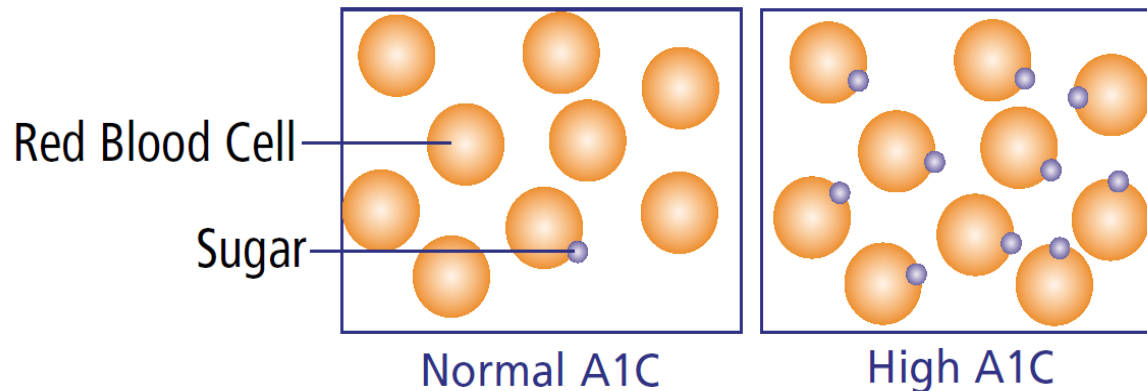


Glycated Hemoglobin

Glycated Hemoglobin (HbA1C)

- Hemoglobin A1c (HbA1C) is a term used to describe a series of stable minor hemoglobin components formed slowly and nonenzymatically from hemoglobin and glucose.



- The average life span of a red blood cell is 120 days (three months), and if we measure how many red cells have glucose attached to them, it gives us a guide to the glucose levels in the blood over the last 120 days.

Glycated Hemoglobin (HbA1C)

- Glycated haemoglobin (HbA1c) doesn't measure sudden changes in blood glucose, or what blood glucose level is right at the moment of testing.

Advantages of HbA1C for screening & diagnosis of type 2 diabetes

1. No need for fasting
2. HbA1C less affected by day to day variation in plasma glucose
3. Likelihood of false negatives and positives with repeat testing, is lower with HbA1C than with fasting plasma glucose

The Blood Test With a Memory !!!

HbA1c	Normal/abnormal	Blood glucose level via meter
4.0 - 6.0%	Normal for those without diabetes	3 - 8mmol/L
6.1 - 7.0%	Target range for those with diabetes	4 - 8mmol/L
7.1 - 8.0%	High	8 - 11mmol/L
8.1 - 9.0%	Too high	11 - 14mmol/L
Greater than 9.1%	Very high	15mmol/L and above

Glycated Hemoglobin (HbA1C)

An Index of Mean Glycemia and a Measure of Risk for the Development of Diabetes Complications

Guidelines for Lab Analysis in Detection & Measurement of Diabetes Mellitus

- *Laboratories should use only HbA_{1c} assay methods that are certified by the National Glycohemoglobin Standardization Program (NGSP) as traceable to the DCCT reference*
- *Laboratories that measure HbA_{1c} should participate in College of American Pathologists (CAP) proficiency- testing program*

HbA1C @ Metropolis

- Is performed by the HPLC method
- Is NGSP level 1 certified
- Is CAP certified

Frequency of HbA1C Testing

- Biannually in all patients
- Quarterly for patients whose treatment has changed or who do not meet treatment goals

American Diabetes Association (ADA) Recommendations for Treatment Goals in Diabetics

- Maintain HbA1C target of <7% for nonpregnant adults
- Higher values for children and adolescents and for patients with history of severe hypoglycemia, or advanced complications

Individuals with HbA1C values between 5.7% and 6.4% should be considered at high risk for future diabetes and should be counseled about effective measures to reduce their risk