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Why measure HbA1c?

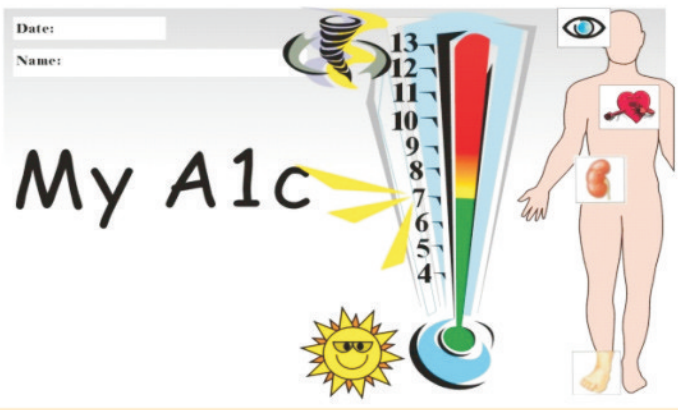
HbA1c has gained acceptance as an accurate index of long-term blood glucose control. Longitudinal studies have shown that good metabolic control, reflected by stable HbA1c level can prevent or postpone micro- and macrovascular and other complications or slow down the progress of such complications in both Type 1 and Type 2 diabetics. The Diabetes Control and Complications Trial (DCCT), and the United Kingdom Prospective Diabetes Study (UKPDS), demonstrated that there is a good correlation between blood glucose and the incidence of late complications. In this study of 1,141 patients with Type 1 diabetes, with or without complications at baseline, the mean HbA1c values over the nine-year study period were 7.2% with intensive therapy and 9.1% in the conventional group. Even more important; late complications were rarer in the group with lower HbA1c treated intensively. The results showed that intensive treatment with lower and more stable HbA1c values delayed the onset or slowed the progression of clinically important retinopathy, including vision-threatening lesions, nephropathy and neuropathy by 35% to more than 70%. The study established HbAc1c as the gold standard of glycemic control, with levels < 7% deemed appropriate for reducing the risk of vascular complications. In another longitudinal study: the Barbados Eye Study, risk for developing diabetic retinopathy increased with 30% for each increase of HbA1c of 1%. In the UKPDS, a study of over 4,000 patients, **a 1% reduction of HbA1c was associated with a 35% reduction in cardiovascular event, an 18% reduction in heart attack and a 17% reduction in all-cause death**. The EURODIAB study it was seen that HbA1c was a predictor for the development of retinopathy and neuropathy, and also for worsening of kidney disease.

It was recently reported that HbA1c could be an independent risk factor for stroke with similar relative risk as for coronary heart disease, and not only in diabetics, but also in adults without diabetes.

Most of the cost of diabetes - in suffering, in lost years of working capacity, and in health care comes from its complications. **Efficient glucose control and monitoring using HbA1c can reduce diabetes complications efficiently.**

Interpretation of HbA1c Ideally, an important diabetes care goal would be to maintain glycohemoglobin levels in the non-diabetic range. Overall diabetic complication rate is low when HbA1C is maintained less than 7%. While keeping HbA1C less than 6.5% is ideal but incidence of hypoglycemia increases significantly. In normal person HbA1C will always come less than 6.5%. Nowadays HbA1C is also used to diagnose diabetes where cut off value between normal person and diabetic patient is 6.5%.

Target
HbA1C < 7%



- **Good control < 7%**
- **Fair control 7- 8 %**
- **Poor control > 8 %**