

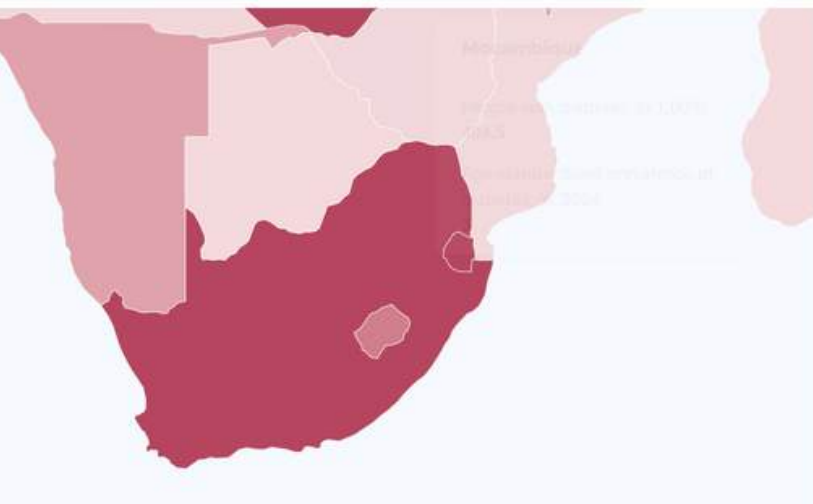
HbA1c, more than just a number!



Did You Know?

South Africa

Diabetes country report 2000 — 2050



Number of adults (20–79 years) with diabetes in South Africa (ZA)

2000	886.4 thousand
2011	1.9 million
2024	2.3 million
2050	3.9 million

South Africa is one of the 49 countries and territories in the IDF Africa Region. South Africa has the fourth highest number of adults (20-79 years) with diabetes in the Region.

Main types of diabetes



Type 1

Can develop at any age and requires insulin treatment for survival.



Type 2

Accounts for around 90% of all diabetes and is more commonly diagnosed in adults.



Gestational

Occurs with high blood glucose during pregnancy and can cause complications for both mother and child.

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HbA1c, more than just a number!

OUR SOLUTION



How to measure HbA1c?

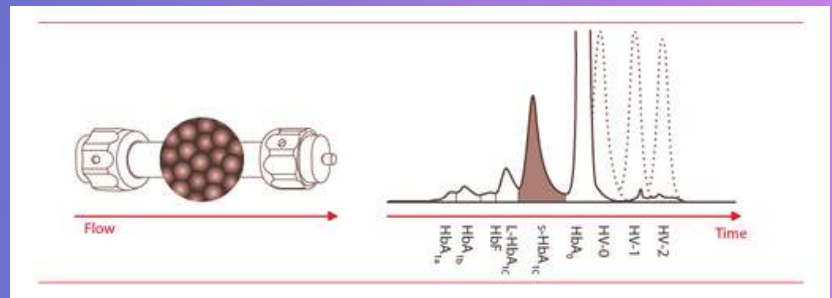
One of the reference methods for HbA1c measurement is “High Performance Liquid Chromatography”, better known as “HPLC” (this method was also used in the DCCT and UKPDS trials). With this technique the different haemoglobin fractions are separated based on charge.

When using the Tosoh Automated Glycohemoglobin Analyzer HLC-723G8 (G8) separation of the haemoglobin fractions is obtained by use of a negatively charged column and positively charged buffers that compete with the different haemoglobins to bind to the column (=cation exchange).

Tosoh offers you over 35 years of world leading HPLC experience.

WHY USE HPLC?

The advantage of HPLC lies in its ability to separate variant haemoglobins and, in doing so, allows better interpretation of the result



HbA1c can be used for three specific applications for diabetes patients:

- **For identifying risk:** HbA1c could be used as a tool, among other parameters, to identify individuals at risk for developing diabetes. The American Diabetes Association (ADA) suggested 5.7 – 6.4 % (39 – 47 mmol/mol) as the high risk range.
- **For Diagnosis:** An international expert committee assembled by the American Diabetes Association (ADA), International Diabetes Federation (IDF), and European Association for the Study of Diabetes (EASD) has recommended the HbA1c assay as the new test for the diagnosis of diabetes. An HbA1c value greater than or equal to 6.5 %, or 48 mmol/mol, is used as cut-off for the diagnosis of diabetes. Diagnosis should be confirmed with a repeat HbA1c test.
- **For treatment follow-up:** Lowering HbA1c to below or around 7 %, or 53 mmol/mol, has been shown to reduce micro-vascular and neuropathic complications of type 1 and type 2 diabetes. HbA1c of \geq 7 %, or 53 mmol/mol, should initiate or change therapy to reach an HbA1c level of $<$ 7 %, or 53 mmol/mol. Relevant changes in serial measurements of HbA1c testing serve as the guide to changes in therapeutic regimes.

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