What is happening with HbA1c?

The HbA1c test gives you an overall picture of what your blood glucose levels have been during the last 2 -3 months.

It measures the amount of glucose that has 'stuck' to the red cells in your blood stream. It is therefore a guide to the amount of glucose that has 'stuck' to other parts of the body such as your eyes, kidneys, nerves and blood vessels These are the areas where diabetes complications can occur.

Therefore your HbA1c result gives you an idea of your risk of developing complications from your diabetes, the higher the number, the greater your risks.

How the test is different from the blood glucose level of a home blood glucose test?

When you measure your blood glucose, this shows your glucose level at that moment in time. It will change frequently depending on your insulin, food and activity. The HbA1c does not change day to day and gives you an overview of your control and the actual numbers reported are not equal to each other, eg an HbA1c of 8 does not equal an average glucose level of 8.

Current HbA1c Numbers

Over the years the HbA1c has been reported as a percentage (%) with a target range of 6-7%. However, this should be individualised depending on for example your risk of severe hypoglycaemia or if you are planning a pregnancy.

Why Change?

The new IFCC reference method is more specific way of checking the HbA1c that has a number of benefits for certain groups of the population, for example it is more accurate in certain cultural groups and will now be standardised across laboratories internationally. In future, HbA1c will be reported in mmol/mol.

Units and Numbers

In a sense this is a bit like converting from feet and inches to meters and centimetres, or using centigrade instead of Fahrenheit . The numbers and the units they are measured in will change, but the new units have the same meaning as their equivalent old unit.

Targets in New Units

The new target is now **45-55 mmol/mol**.

How Old and New Relate

A guide to the new values expressed as mmol/mol is:

HbA1c as a %	HbA1c mmol/mol
6.0	42
7.0	53
8.0	64
9.0	75
10.0	86
11.0	97
12.0	108

The fact that the number is higher now does not mean there is more glucose in your blood. It is just a different way of expressing the old numbers.

Changeover in Reporting of Results

The new units for HbA1c are obviously very different to those currently in use. From June 2009, to give everyone time to become familiar with the new units, and how they relate to the current figures, results will be given as both the old and new value; HbA1c units (%) and HbA1c units (mmol/mol). This double reporting will continue until 31 May 2011 and after that the figures will only be given in mmol/mol.