



• Dr. P.A. Spear • Dr. K. Marcovitch • Dr. G.M. Somerville • Dr. David Ng • Dr. N. Tucker  
• Dr. L.M Vajoczki • Dr. W. Hatch • Dr. A. Macdonald • Dr. A. Yu  
2200 Yonge Street, Suite 600, Toronto, ON M4S 2C6 Ph: (416) 486-6084 F: (416) 638-7379 www.torontoeyeclinic.com

## Diabetes Mellitus

### *What is Diabetes Mellitus?*

Diabetes Mellitus or Diabetes is a chronic, multi-factorial disease. If the disease is uncontrolled, it will cause further diseases in the eyes, kidneys, nerves, heart, and blood vessels. There are two types of Diabetes Mellitus; Type 1 occurs when the body cannot properly produce insulin and Type 2 occurs when the body is resistant to insulin. Insulin is a hormone that allows the cells in bodily tissues to absorb glucose from the blood. When there is a lack of insulin or response to insulin, the build-up of glucose in the blood will result in many complications throughout the body.

### *What is the Diabetes A1C test?*

The Diabetes A1C or Hemoglobin (Hb) A1C test is a blood test that is done every three to four months. It plays an important role in monitoring the control of diabetes. This test gives a “big picture” as it provides an average of your blood sugar level over the past two to three months. It has been proven to be a lot more useful than daily blood glucose tests. This is because daily blood glucose tests measure blood glucose levels at an instance, however this does not give an accurate representation as the blood glucose levels fluctuate throughout the day.

The result of the A1C test will be reported as a small number. An A1C number below “6.5” indicates good, consistent control of diabetes. It is very important to know your A1C number so you are aware of how well your overall diabetic control is.

### *How does Diabetes affect my eyes?*

Diabetic retinopathy, which is one of the complications of diabetes, is the leading cause of blindness in North America. This eye disease is more prevalent in individuals who have had diabetes for a long period of time and in individuals with an A1C reading above “6.5”. Elevated blood glucose levels causes glucose to deposit in the blood vessel walls

resulting in a thickening of blood vessels in the retina. This reduces the blood flow and increases the viscosity of the blood causing blood clots and rupturing of the blood vessels. As a result, microaneurysms, dot/blot hemorrhages, and cotton wool spots are seen in the retina.