

Diabetes

Diabetes is a chronic disease characterised by high levels of glucose in the blood. Blood sugar levels are controlled by insulin, a hormone produced by the pancreas. Diabetes occurs when the pancreas is unable to produce enough insulin, or the body becomes resistant to insulin, or both.

Blood glucose (blood sugar)

When food containing carbohydrate is consumed, it is broken down and released into the bloodstream in the form of glucose. In order for the body to store or use this blood glucose as a fuel for energy it needs to get into our cells. This requires insulin, a hormone produced by the pancreas. Insulin is the 'key' that allows glucose to enter cells. For people with diabetes, there is a deficiency in insulin production and/or action, either partial or total resulting in a rise of glucose levels in the blood.

The 'normal' range for blood glucose is about four to six mmol/L (fasting). The ranges will vary depending on the individual and an individual's circumstances.

Types of Diabetes

There are two major types of Diabetes:

Type 1: (also known as juvenile diabetes or insulin dependent diabetes) is an autoimmune disease where the immune system attacks cells in the pancreas which produce insulin. This condition occurs mostly in children and young adults. The pancreas completely fails to produce insulin, thus treatment has to be given in the form of insulin injections. Some typical signs and symptoms include extreme thirst, increased frequency of urination, blurred vision, weight loss and acidic breath.

Type 2: (also known as late onset diabetes or non-insulin dependant diabetes). This form is characterised by either an inadequate amount of insulin being produced or the body becomes more resistant to the action of the insulin. Type 2 Diabetes is by far the more common form and is a progressive disease, with cases being controlled by lifestyle management, oral medication and/or insulin. Signs and symptoms can be similar to those of type 1 (extreme thirst, increased urination, blurred vision, acidic breath) or there can be none at all.

What are the predisposing factors?

There are a number of factors that can increase the risk of developing type 2 Diabetes:

- Obesity; Body Mass Index (BMI) greater than 30.
- Genetics; close family history of the disease.
- Age; over 55 years.
- Lack of exercise; sedentary lifestyle.
- People with high blood pressure and high cholesterol.
- Individuals who carry excess body fat around the abdomen and upper body (not necessarily obese).
- Women who have previously had gestational diabetes.
- People who smoke.
- People aged over 35 years who are Torres Strait Islander, Pacific Islander, Asian or Maori descent.

Potential health complications

If the disease is poorly managed, it can lead to the following major health complications:

- Damage to blood vessels leading to increased risk of cardiovascular disease.
- Damage to capillaries in the eyes that can lead to blindness.
- Peripheral blood-flow impairment that can lead to ulceration of the lower limbs and possible amputation.
- Kidney damage and possible dialysis.
- Damage to the nervous system.
- Impotence.

Prevention

- Regular blood glucose and insulin testing.
- Maintaining a healthy lifestyle.
- Quitting smoking.
- Drink no more than two standard alcoholic drinks per day with two alcohol free days per week.
- Be physically active – at least 30 minutes of moderate intensity exercise on most days of the week such as power walking, swimming, golf or household tasks.
- Follow a healthy eating plan.

For more information visit the following websites:

www.diabetesaustralia.com.au | www.diabeteswa.com.au

