Facts about diabetes

Diabetes is a chronic disease that occurs when the pancreas does not produce enough insulin or when the body is not able to effectively use the insulin it produces. Insulin is a hormone that regulates sugar levels in the blood. Hyperglycemia, or the increase of sugar levels in the blood, is a common effect of non-controlled diabetes and, with time, may cause serious damage to many of the body's systems, especially nerves and blood vessels.

Type 1 diabetes

Type 1 diabetes (formerly known as insulin-dependent, juvenile diabetes) is characterized by deficient insulin production and requires daily administrations of insulin. The cause of type 1 diabetes is unknown, and it is not avoidable, as far as current scientific knowledge is concerned.

Symptoms include excessive excretion of urine (polyuria), thirst (polydipsia), constant hunger, weight loss, sight alterations and fatigue. These symptoms may occur suddenly.

Type 2 diabetes

Type 2 diabetes (formerly known as non-insulin-dependent or adult diabetes) results from inefficient use of insulin by the organism. Most people with diabetes in the world have type 2 diabetes, and it is to great extent a result of excess body weight and physical inactivity.

The symptoms may be similar to those of type 1 diabetes, but they are generally less acute. As a result, it may take many years to diagnose the disease when complications have already appeared.

Until recently, this type of diabetes occurred only in adults, but nowadays it is increasingly diagnosed in children.

Gestational diabetes

Gestational diabetes is hyperglycemia with sugar levels in the blood above normal, but under those for a diabetes diagnosis, which occurs during a pregnancy. Women with gestational diabetes are at greater risk of having complications during pregnancy and during labor. They, as well as their children, are also at greater risk of contracting type 2 diabetes in the future. Gestational diabetes is diagnosed through pre-natal screening, and not through reported symptoms.

What are the common consequences of diabetes?

With time, diabetes may damage the heart, blood vessels, eyes, kidneys and nerves. Adults with diabetes have a risk of heart attacks and strokes that is two to three times higher than normal. Combined with a reduction in blood flow, neuropathy in the feet increases the chances of feet ulcers, infection and the eventual need to amputate the member.

Diabetic retinopathy is an important cause of blindness and occurs as a result of long-term damage accumulated in the small blood vessels of the retina. Almost 3% of global blindness can be attributed to diabetes. Diabetes is also one of the main causes of kidney failure.

Prevention

Simple lifestyle measures have proved to be efficient in preventing or postponing type 2 diabetes. To help prevent type 2 diabetes and its complications, people must:

- Attain and maintain healthy body weight;
- Be physically active – do at least 30 minutes of regular physical activity of moderate intensity on most days. More activity is necessary to control body weight;
- Maintain a healthy diet, avoiding sugar and saturated fat; and
- Avoid consuming tobacco – smoking increases the risk of diabetes and cardiovascular diseases.

Diagnosis and treatment

Early diagnosis is possible through relatively cheap tests of sugar levels in the blood. Treatment for diabetes includes a diet and physical activity, as well as reducing glucose levels in the blood and the levels of other risk factors that are known to damage blood vessels. Abstaining from tobacco is also important to avoid complications.

Interventions that reduce costs and are feasible in developing countries include:

- Glucose level control, especially in type 1 diabetes. People with type 1 diabetes need insulin; people with type 2 diabetes can be treated with oral medication, but some may also need insulin;
- Blood pressure control;
- Foot care;
- Screening and treatment for retinopathy (which causes blindness);
- Control of lipids in the blood (to regulate cholesterol levels);
- Screening for early signs of kidney disease and treatments related to diabetes.