

Type 1 Diabetes

What is Type 1 Diabetes?

Type 1 diabetes, previously known as insulin-dependent diabetes is usually encountered in children and young adults and was also called 'juvenile diabetes'. Insulin is a hormone (chemical messenger) which is produced by the beta cells of the pancreas. In type 1 diabetes the beta cells are gradually destroyed by a process called 'autoimmune disease'. The immune system fails to recognise the beta cells as part of your body and attacks them. When the number of functioning beta cells dwindle eventually, your pancreas produces little or no insulin and diabetes develops.

Insulin is the hormone which helps move glucose into the cells of the body. Without insulin we cannot utilize glucose effectively and blood sugar levels increase. The body cannot use this glucose (sugar) which spills over into the urine and is lost. An increased volume of fluid is also lost resulting in the typical symptoms of thirst and increased passage of urine. You lose weight due to inability to absorb sugars and progressive weakness ensues. Patients with type 1 diabetes are dependent on insulin for survival hence the term 'insulin dependent' diabetes.

Over a long period of time, high levels of sugar in the blood can cause permanent

damage to the eyes, nerves and kidneys. Long standing diabetes also does damage to blood vessels resulting in heart attacks and strokes. Controlling your sugar levels and regular monitoring of your condition can prevent many of these complications. People with type 1 diabetes can lead happy healthy lives by taking good care of their blood sugar.

What are the symptoms of type 1 diabetes?

Type 1 diabetes often develops rapidly, and the following symptoms may appear within weeks:

- excessive thirst
- frequent urination
- extreme hunger but loss of weight
- blurred vision
- nausea and vomiting
- weakness and tiredness
- irritability and mood changes

Is it Life threatening?

Finding out you have diabetes can be a frightening experience. Type 1 diabetes can be fatal if not treated with insulin. Most patients lead relatively normal lives with insulin therapy. However the normal life span is reduced by approximately five years by a diagnosis of type 1 diabetes.

Are there any urgent problems?

There are three emergencies that occur with type 1 diabetes.

1. Diabetic Ketoacidosis (DKA)
2. Hypoglycaemia (low blood sugar)
3. Hyperglycaemia (high blood sugar)

Diabetic Ketoacidosis is a life threatening complication which occurs in people with type 1 diabetes. It occurs due to a variety of factors ranging from infections and stress to either deliberately or un-intentionally neglecting to take one's dose of insulin. Due to lack of insulin there is a rapid breakdown of fat, forming acidic chemicals called ketone bodies. This condition is described in detail on a separate page.

Hypoglycaemia does not occur due to diabetes but rather as a complication of its treatment.

What are the complications?

The long term complications of type 1 diabetes are believed to be related to persistently high levels of blood sugar. Complications may involve the eyes, kidneys and nerves and are described in detail in other sections.

Does type 1 diabetes run in families?

Statistics tell us that 8 out of 10 people with type 1 diabetes have no other family members affected. The remaining two would have at least one family member with diabetes. If your mother or father has diabetes your risk of developing type 1 diabetes is higher than the general population.

How is type 1 diabetes treated?

The discovery of insulin is to this date the most important breakthrough in the treatment of diabetes. Before this type 1 diabetes was often fatal at a young age as the complication of ketoacidosis cannot be treated without using insulin. Type 1 diabetes must be treated with insulin unlike type 2 disease which may sometimes be managed with diet alone or by the use of tablets. Insulin cannot be taken as a tablet as it would be rapidly destroyed by the acid in the stomach. Insulin therapy involves regular injections into the layer of fat just beneath the skin. Please refer to the page on Insulin therapy for more information on the use of insulin.

Useful Links

<http://www.whatistype1diabetes.com/> - a site by NovoNordisk

Dr. Nishan Wijenaiké, Consultant Physician
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