

Diabetes has reached epidemic proportions in the country and is increasing with “tsunamic” speed

Diabetes has emerged as a major healthcare problem in India. There were an estimated 40 million persons with diabetes in India in 2007 and this number is predicted to rise to almost 70 million people by 2025

What is diabetes?

Diabetes mellitus or often referred to simply as **diabetes** is a syndrome metabolism , usually due to a combination of hereditary and environmental causes ,resulting in high blood sugar levels (hyperglycemia).Blood glucose levels are controlled by a complex interaction of multiple chemicals and hormones in the body , including the hormones insulin made in the beta cells of the pancreas. Diabetes mellitus refers to the group of diseases that lead to high blood glucose levels due to defects in either insulin secretion or insulin action in the body

What are the causes and type of diabetes mellitus?

Diabetes develops due to a diminished production of insulin or resistance to its effects. Both lead to hyperglycemia, which largely causes the acute sings of diabetes . excessive urine production, resulting compensatory thirst and increased fluid intake, blurred vision, unexplained weight loss, lethargy, and changes in energy metabolism –seen in type 2 diabetes. In children who have type 1 Diabetes may also present with bed wetting , infections and failure to thrive The other diabetes is Gestational diabetes where there is resistant to effect of insulin and Neonatal Diabetes where there is genetic defect and insulin does not have much role. There is also maturity onset diabetes of the young (MODY) which is a group of several single gene (monogenic) disorders with strong family histories that present as type 2 diabetes before 30 years of age.

What is the treatment of diabetes?

All forms of diabetes have been treatable since insulin became medically available in 1921, but **there is no cure** .The injections by a syringe, insulin pump, or insulin pen deliver insulin, which is a basic treatment of type 1 diabetes. Type 2 is managed with a combination of dietary treatment, exercise, medications and insulin supplementation.

What are the complications of Diabetes Mellitus?

Diabetes and its treatments can cause many complications. Acute complications (hypoglycaemia, ketoacidosis, or nonketotic hyperosmolar coma) may occur if the disease is not adequately controlled serious long –term dysfunction and poor wound healing. poor healing of wounds , particularly of the feet, can lead to gangrene, and possibly to amputation .adequate treatment of diabetes , as well as increased emphasis on blood pressure control and lifestyle factors (such as not smoking and maintaining a healthy body weight), may improve the risk profile of most of the chronic complications .

Type 1 diabetes mellitus

Type 1 diabetes mellitus is characterized by loss of the insulin-producing beta cells of the islets of Langerhans in the pancreas leading to a deficiency of insulin. This type of diabetes can be further classified as immune-mediated or idiopathic. The majority of type 1 diabetes is of the immune-mediated variety, where beta cell loss is a T-cell mediated autoimmune attack. There is no known preventive measure which can be taken against type 1 diabetes. Most affected people are otherwise healthy and of a healthy weight when onset occurs. Sensitivity and responsiveness to insulin are usually normal, especially in the early stages. Type 1 diabetes can affect children or adults but was traditionally termed “juvenile diabetes “because it represents a majority of the diabetes cases in children.

The principal treatment of type 1 diabetes, even in its earliest stages, is the delivery of artificial insulin via injection combined with careful monitoring of blood glucose levels using blood testing monitors. Without insulin, diabetic ketoacidosis often develops which may result in coma or death. Treatment emphasis is now also placed on lifestyle adjustments (diet and exercise) though these cannot reverse the progress of the disease. Apart from the common subcutaneous injections, it is also possible to deliver insulin by a pump, which allows continuous infusion of insulin 24 hours a day at preset levels, and the ability to program doses (a bolus) of insulin as needed at meal times. An inhaled form of insulin was approved by the FDA in January 2006 , although it was discontinued for business reasons in October 2007 . Non – insulin treatments, such as monoclonal antibodies and stem – cell based therapies, are effective in animal models but have not yet completed clinical trials in humans.

Myths and question on diabetes.

1. I am not fond of sweets ,so I will not get sdiabetes

Reality onset of diabetes is not really linked to intake of sweets. In fact diabetes is more likely to occur in those who do not exercise regularly, or those who are overweight, rather than those who eat sweets. Once you develop diabetes; however, sweets are best avoided

2. I DON'T CARE IF I HAVE HIGH BLOOD SUGER, I FEEL FINE

REALITY; most often, symptoms do not correlate with level of blood sugar depending on symptoms rather than blood sugar value can be very misleading . The high level of blood sugar will slowly damage your other organ systems like eyes, kidneys heart etc.. And you will suddenly find yourself facing serious problems. If however, you control your diabetes. Well the chances of you suffering from complications later are much reduced.

3. Diabetes simply means elevated blood sugar level.

Reality; diabetes's often part of a syndrome which includes hypertension, abnormal cholesterol levels and obesity. To treat diabetes in holistic manner, it is important to correct all these factors.

4. I will never take insulin. Once on insulin, always on insulin.

Reality; it is not necessary that one has to be on insulin forever. It depends on the reason why insulin was started in the first place

5. I exercise a lot, so I don't really need to diet to lose weight.

Reality; exercise is a very important component of a fitness program, but will not lead to much weight loss unless accompanied by a strict diet schedule.