

The substances like
adrenaline, pitutary
hormones, thyroid
hormones,



**ASSIGN
BUSTER**

The normal blood glucose level ranges from 70-90 mg per 100 ml but if the fasting blood sugar level increases more than 120 mg per 100 ml then diabetes mellitus should be suspected. If the blood sugar is more than the normal concentrations then it is known as hyperglycemia but when the blood sugar level is less than the normal concentration then it is known as hypoglycemia.

Hyperglycemia is characterised by high concentration of sugar in blood and the presence of sugar in the urine (glycosuria). Diabetes mellitus is a disease that occurs throughout the world and about 30 million diabetics are there in the world. The incidence of diabetes is increasing because female diabetics are able to have children. The incidence of diabetes is higher in persons above 40 years of age. Females especially the married ones are more prone to get this disease. Obesity, dietary factors and heredity are the other contributory factors for diabetes.

Alcoholic beverages increase appetite, encourage weight gain and when taken in excess damage the pancreas and thereby increase the risk of diabetes. Diabetes could be caused not only by deficiency of insulin but also due to disturbances in the level of certain other substances like adrenaline, pituitary hormones, thyroid hormones, oestrogens, corticosteroids, glucagon etc. All these substances produce their effect on blood sugar level so glucose tolerance curve should be determined which will be most useful test for diabetes.

Types of Diabetes:

Clinically diabetes is of two types: (i) The juvenile onset type or insulin dependent diabetes (IDDM): This type of diabetes usually develops at a young age during first 40 years of life and has a very rapid onset. In this type of diabetes the pancreas produces very little or no insulin so administration of insulin is required hence it is called insulin dependent diabetes. (ii) The adult or maturity onset type or non-insulin dependent diabetes (NIDDM): This type of diabetes usually develops after 40 years of age or elderly persons who are obese and progresses slowly. In this type of diabetes, the pancreas produces inadequate amount of insulin.

This type of diabetes can be controlled by dietary control alone and light exercise or along with oral hypoglycemic drugs.

Signs and Symptoms:

(iii) Frequent urination and passing large volume of urine. (iv) Increased thirst. (v) Increased appetite. (vi) Loss of weight. (vii) General weakness and fatigue. (viii) Pain in the legs. (ix) Irritability.

(x) Lack of concentration. (xi) Prone to infection. (xii) Delayed wound healing.

All diabetics do not have all these symptoms but from No. (iv) to (x) are definite indications of diabetes.

Possible Complications of Diabetes:

Slow blood circulation in legs, heart disease, kidney failure, poor vision, numbness, parasthesia, feeling of pins and needles, loss of sensation are

some of the common complications of diabetes but if the blood sugar is controlled to normal range i.

e. 120-150 mg per 100 ml then most of the above mentioned complications can be prevented. As a result of long-term complications like heart disease, kidney damage and even blindness may occur. As compared to a non-diabetic, the risk of diabetic getting a heart attack is two times more, four times for gangrene, 17 times for kidney failure and 25 times for blindness.

Prevention and Control:

Diabetes cannot be cured but can be effectively controlled so that a diabetic can enjoy life, feel hale and hearty. Life expectancy in a well controlled diabetic is the same as that in a non-diabetic.

Diabetes can be prevented and controlled by adopting following measures:

(i) The diabetic case should be detected as early as possible. A prediabetic has no symptoms of diabetes, has normal blood sugar but shows impaired glucose tolerance curve. (ii) A diabetic should not marry to another diabetic otherwise their children will also be diabetic. (iii) The obesity should be reduced by restricting the diet and going for normal physical exercise.

(iv) The body weight should be 10 percent less than the normal body weight.

(v) Personal hygiene including care of feet and skin should be taken care of.

(vi) Regular check up of urine sugar and blood sugar should be done. (vii)

The patient should try to avoid emotional and social stress and strain in life which are associated with diabetes.

Treatment:

Diet, physical exercise and drugs are recommended for treatment of diabetes. The treatment should be done under the supervision of a qualified diabetologist and supervised by him once in three months.

The patient should undergo full biochemical tests, eye check up and obtain advice for foot care at least once a year. The commonly used drugs in controlling the diabetes are insulin which is administered by parenteral route in case of insulin dependent diabetes. For non-insulin dependent diabetes various types of oral tablets are available. These tablets belong to a class of compounds known as sulphony lurea.

These tablets include Daonil, Diabenese, Glynase, Ratinon, Euglucon etc. These tablets are better absorbed from empty stomach so they should be taken 15-30 minutes before meals once or twice a day or as suggested by the physician. Diabetes is a disease which leads to many complications such as blindness, kidney failure, coronary thrombosis and gangrene of lower limbs therefore blood sugar level must be maintained between 80-150 mg per 100 ml to prevent majority of the complications that arise from diabetes. For this purpose he must get the expert advice from a qualified diabetologist by getting himself registered with specialised clinics known as diabetic clinics for the diagnosis and treatment of diabetes.