

## Overview of Type 2 Diabetes Mellitus

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Diabetes mellitus (DM) is a metabolic disorder that is characterized by the chronic hyperglycemia that results in insulin secretion, insulin resistance and insulin action. It may also have the effects in metabolic abnormalities like carbohydrates, lipids, and proteins. Low levels of this insulin may target the insulin resistance of targeted tissues; Skeletal muscle (which helps in promoting the energy or other fuel sources in the body), adipose tissues (this is an endocrine organ which can influence both the lipid and glucose metabolism), these can promote the synthetic lipid metabolism after the releasing of insulin signaling. When the level of insulin receptors are lesser or extent signal transduction system or these effector enzymes or any genes are responsible for those metabolic abnormalities. Increasing in the levels of blood glucose in the body leads to the serious damage to the kidneys, heart, blood vessels and eyes.

Insulin mainly secreted from the  $\beta$  cells of islets of Langerhans of pancreas. These pancreatic  $\beta$  cells dysfunctions is an important role in the diabetes mellitus Type I and II. Insulin is synthesized by the proinsulin (biologically inactive precursors to the biologically active sites in insulin) and later on it process to proinsulin (substance that is converted to the insulin). Type I is an autoimmune disease which is characterized by insulin deficiency and that results in hyperglycemia. Primarily it is found in young adults or young age persons with the insulin deficiency. Over the past 25 years diabetes is rapidly increasing in India. Type 1 is a condition which the body produces less amount of insulin or no insulin. Researchers found that according to our own body immune system type 1 will not occur more in humans. One more important reason is due to genetics and climatic conditions there is no chance of observing type I diabetes. Type II is seen worldwide approximately 400 million people are suffering from diabetes. In recent surveys says that around 200 million are undiagnosed diabetes, but still having with that disease conditions and symptoms. This disease is associate with high mortality and morbidity rate.

The difference between Type I and Type II is; in type I cells attacks the body and body does not produce sufficient insulin. Whereas in type II the body is not able to produce insulin properly. Type I is no particular symptoms, type II; some risk factors and some effects we can able to identify. Symptoms can be seen more easy and quickly in type I, delay and difficult to slow observation in type II, we can manage type I by taking the insulin to body, and that is the only way to manage but in type II there are so many ways e.g., insulin, medication, exercise, diet plan. At last there is no cure for this type I; type II can be cured and there are many evidenced based cases for prevention and cure.

The complications may include, diabetes may increase the risk of many serious health problems. With care and good treatment we can cure diabetes with being serious to person by changing the life style, food habits, and medications. Some common health complications are; Neuropathy, which is nerve damage by causing the diabetes, so knows as Diabetic Neuropathy and around half of the persons will effect with this problem. Skin care complications such as skin allergies, skin infections may occur to the person with diabetes. Eye Complications is a condition is called Diabetic retinopathy, effects to the eyes and causes blind (glaucoma problems). Kidney Complications are also called as Diabetic Nephropathy, diabetes and blood pressure are main reasons for these kidney problems. The cardiovascular diseases: persons with diabetes can consult a doctor at least twice a week or thrice a week; because of high sugar levels in body may lightly cause the heart stroke. High blood pressure (B.P) which is also called as hypertension it may raises the heart stroke and heart attack, eye problems, kidney diseases.

The common symptoms include; thirst, weakness, tired feeling, blurred vision, frequent urination, dry mouth, weight loss, and numbness. Other symptoms involves, dry and itchy skin some woman, yeast infections like fungal infections. In men; decreased the of muscle strength, erectile dysfunction.

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