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## Diabetes and Associated Risk Factors

Akhila Pasupuleti\*

Department of Pharmacy, Andhra University, Visakhapatnam, India

### Review Article

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#### \*For Correspondence

Akhila Pasupuleti, Department of Pharmacy, Andhra University, Visakhapatnam, India  
E-Mail: [akhilapasupuleti9@gmail.com](mailto:akhilapasupuleti9@gmail.com)

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#### ABSTRACT

The Diabetes or Diabetes mellitus is a cluster of metabolic disorders results in long period of blood sugar levels. Diabetes is associated with wide risk factors including metabolic syndrome, nephropathy, low circulating testosterone levels, renal complications, hypertension, cardiovascular disease etc.

#### INTRODUCTION

Diabetes is one of the chronic non communicable public health problems which is serious and silent due to the irregular production of insulin hormone [1]. Millions of people are suffering from diabetes as per WHO. Diabetes is cause of deaths of millions [2]. People with diabetes have more risk of numerous health problems. In patients with type 2 diabetes the associated risk factors are metabolic syndrome, nephropathy, low circulating testosterone levels, renal complications, hypertension, cardiovascular disease and obesity with wide range of adverse effects [3,4].

##### ***Gastro intestinal system***

Most of the patients with diabetes complain of constipation, which relates to autonomic neuropathy, decreasing intestinal motility and gastro-colonic reflex reducing and relaxing capacity [5]. Gastroparesis, the complex syndrome of delayed gastric emptying, occurs more commonly in diabetic patients [6]. Diabetes also causes acute gastric dilatation [7].

##### ***Heart diseases and obesity***

Risk of heart disease is six times more in diabetic women compared to normal woman [8]. Most patients with type 2 diabetes are obese, and the global obesity epidemic explains prevalence of type 2 diabetes [9,10].

##### ***Depression***

Depression is a common problem among people suffering from diabetes mellitus [11,12]. Diabetes and depression leads to a lethal combination [13-15]. Eminent Professors like Barry Elliot Hurwitz researches on early interactions of behavioral factors like stress, anxiety, depression, nutrition etc.

##### ***Neuromuscular and respiratory function***

Diabetes mellitus has significant effect on neuromuscular function or neuromuscular blockade. In majority of cases diabetes alters the neuromuscular function [16,17]. Diabetes slows the nerve conduction velocity and

reduces the response to amplitude [18]. Many studies have conducted to research the impact of diabetes on respiratory function and found decrease in the functioning of the lungs [19,20]. The bronchial activity is also reduced in patients suffering with Diabetes [21].

### ***Gestational weight gain***

The offspring birth weight and gestational weight gain are high in women with type 1 diabetes compared to women with type 2 diabetes [22]. Diabetes also affects the pregnancy outcome [23].

### ***Periodontitis***

Periodontitis which is a chronic inflammatory disease as diabetes mellitus have interrelation with each other. There is a two-way direct relationship with unknown mechanism. The severity of one disease increases the other [24-27].

### ***Colorectal cancer and skin infections***

Diabetes Mellitus is associated with colorectal cancer is proved by many studies [28-31]. CRC Patients with diabetes have larger tumors than those without DM. Cancer and diabetes are directly related to each other. The skin of Diabetic's is more prone to skin infections which are uncommon in non-diabetics. Ketoacidosis is the one of the most critical risk factor in individuals with diabetes [32,33].

### ***Hypertension and vitamin D status***

The prevalence of hypertension is relatively high in patients with diabetes [34]. Vitamin D Deficiency is very high in children and adolescents with type 1 diabetes mellitus [35-37]. The serum concentrations of vitamin D are low in people with DM evidently [38].

### ***Allergies and non-alcoholic fatty liver diseases***

Diabetes as an auto immune factor is responsible for allergic response based on the autoimmunity [39]. Non Alcoholic Fatty Liver Diseases causes severe damage to the liver and may lead to fibrosis, cirrhosis and liver cancer. NAFLDs are frequent in patients with type II Diabetes [40,41].

### ***Hypothyroidism and suicide risk***

Hypothyroidism is one of the major risk factor for the development of diabetes [42,43]. The suicidal ideation is common among adolescents with diabetes. The suicide related thoughts are very high in patients with diabetes evidently via insulin injection particularly [44,45].

### ***Tuberculosis***

Globally, Diabetes increases the risk of infection developing active Tuberculosis which are coepedemic to each other with not clear optimum treatment strategy [46,47]. The clinical benefit of the HT administration in women with DM is significantly lower in comparison with a healthy woman [48].

## **CONCLUSION**

Lifestyle changes are essential preventing or delaying the onset of type 2 diabetes in individuals with high risk [49,50]. Healthcare providers are responsible for educating patients properly regarding the risks of diabetes mellitus. People can be more conscious through different articles available from internet sources and different journals like Endocrinology & Metabolic Syndrome, Journal of Diabetes & Metabolism etc

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