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Relationship between Type 2 Diabetes and Fatigue: A Narrative Review

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Abstract

Diabetes has emerged as epidemic worldwide. The current population of diabetes is 19.4 million which will be increased up to 60 million by 2025. India would be ranked first in the prevalence of diabetes globally. Type 2 diabetes is metabolic disorder due to decreased secretion of insulin or resistance to insulin absorption that results in the alteration of metabolism of carbohydrate, lipid and protein. It is associated with many debilitating and long lasting consequences which affect the individual both physically and mentally. Fatigue, pain and depression are the most common complication of diabetes. The purpose of this literature review was to examine the available evidence about the relationship between Type 2 diabetes and fatigue. Approximately 33 articles were included as identified through searches of published studies in major databases namely Google Scholar, PubMed, PEDro etc. using keywords such as "Type 2 diabetes, fatigue, tiredness, relation" and also by Cross-referring. Only articles published after the year 2005 were included in the study. It has been found after the search of the database that fatigue being the most reported symptom in type 2 diabetic individual. Due to this reason it is also considered most significant hurdle in self management of the diabetes. Primary reason of fatigue in individual with type 2 diabetes is descriptively thought to be the presence of poor blood glucose control. Immediate episodes of hyperglycemia have been linked with diabetes. Fatigue is thought to be prevalent in both type 1 and type 2 diabetes. The pathophysiology of fatigue in diabetes suggests the involvement of biochemical and ionic changes in muscles leading to alteration in electrical and contractile properties of muscles. Substrate depletion, high levels of hydrogen ions and presence of inorganic phosphate and potassium have been considered as pathogenesis of fatigue. Studies have reported the linkage of calcium ion over the sarcoplasmic reticulum of mitochondria leading to the decreased synthesis of ATP, leading to fatigue**.**Though the relationship between type 2 diabetes and fatigue is well established; the studies to manage fatigue are very less. Thus, it is important to study the various strategies to manage the diabetes related fatigue.

Keyword: *Diabetes, fatigue.*