IMPACT OF OAT-BETA GLUCAN IN BLOOD GLUCOSE LEVELS AMONG TYPE 2 DIABETIC PATIENTS

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ABSTRACT

Diabetes mellitus (DM) is a worldwide problem influencing children, youths and adults and about 180 million (more than 95%) individuals have type 2 DM. The uses of hypoglycaemic agents or insulin are the usual traditional cures of diabetes. Nonetheless, the widely widespread use of such costly drugs expanded the financial burden upon patients. Lowing glycaemic meals consumption is an extraordinarily fruitful alternative in controlling diabetes. Meals which are rich in fiber are on the top of the glycaemic index and the talents factor is beta glucan. The evidence of ingesting oat beta-glucan to increase glycaemia and insulin stages shouldn't be good headquartered. So, the aim of this overview is to assess the influence of oat-beta glucan in controlling blood glucose phases among type 2 diabetic individuals.

KEYWORDS: Oat beta-glucan, Blood glucose, type 2 diabetes.

INTRODUCTION

Diabetes mellitus (DM) is a syndrome of chronic hyperglycaemia due to relative insulin deficiency, resistance, or both.

Patients with DM are oftimes afflicted with poor wound healing, vascular disorders, cardiovascular diseases, nephropathies, retinopathies and neuropathies. [1]

The prevalence has been increasing steadily all over the globe and calculable that 5% of all deaths worldwide from complications and uses of hypoglycemic agents is the common standard treatments of DM. [2]
According to Andrade et al 2015; the frequent use of such expensive medications multiplied the monetary burden upon patients. As a result, various studies have been done investigation non-pharmacological type of treatments like physical activity and purposeful food to scale back the impact of DM.\textsuperscript{[3]}

Lowering glycaemic food consumption is a terribly fruitful different in controlling DM.\textsuperscript{[4]} Beta glucans comprise a collection of non-starch polysaccharides evidently going on within the cell partitions of grains like oats, rye, barley, mushroom and yeast\textsuperscript{[5]} latest research have stated that beta-glucans should lower hyperglycemia, hyperlipidemia and high blood pressure.

Studies have suggested that meals merchandise containing beta-glucans ought to lessen hyperglycaemia.\textsuperscript{[5,7]}

Reyna et al 2003, suggested that the fiber build a barrier to prevent nutrients inclusive of glucose from being absorbed inside the small gut and therefore decreasing insulinaemia, glycaemia and levels of cholesterol.\textsuperscript{[8]}

Studies which have been analyzing the impacts of beta glucans in those who are more likely to expand metabolic syndrome are frequent, however, the evidence of consuming oat beta-glucan to beautify glycaemia and insulin ranges aren't well hooked up.\textsuperscript{[9]}

So, the goal of this review is to evaluate the impact of oat-beta glucan in controlling blood glucose levels amongst type 2 diabetic people.

All studies that have been selected had met the following criteria
1. Best research that investigated the impact of oat-beta glucan on type 2 diabetics had been blanketed.
2. Research that have been on humans most effective.
3. Randomized controlled Trials.
4. Have manage organization.
5. The least dose changed into 3g of oat beta glucan.

The Searching in PubMed database, we found the 150 articles investigated the result of beta-glucan and only three articles had met the criteria of this review.
The rest of the articles in the PubMed database had been excluded seeing that they were combined between animal and only 3 studies had met the criteria:

1. Cugnet-Anceau et al
2. Reyna et al.
3. AL Jenkins et al.

Age average in studies was 55 years and number of volunteers diversified from 21 to 53.
The minimal dose was once 3.5 g/per individual /per day at the same time the easiest dose was once 10g.

The entire doses had been in a type of food regimen and none of them had been in its pure form (eg. Pills or drugs).

The most up to date RCT study was once investigating the influence of oat-beta glucan on the level of blood glucose among diabetics was finished in 2010 and easiest dose was 10g while the low dose was 3.5g.

The longest period of time for analyzing the outcomes of oat beta glucan was once for 2 months whilst the shortest interval used to be for 3 days.

In Science Direct database, we found some articles have been investigated the influence of beta glucan and different types of fibers on diabetes and different metabolic and cardiovascular ailments, nevertheless, none of these investigations were on the outcomes of oat beta glucan on human type 2 diabetics.

**CONCLUSION**
We conclude from this searching, oat beta glucan has effects in lowering blood glucose amongst type 2 diabetics.

Moreover, there are efficient results of oat beta glucan in decreasing cardio-metabolic chance reasons comparable to LDL cholesterol.

Needing, more investigation for long-term influence of oat beta glucan.
REFERENCES