Abstract

Introduction: Functional foods have been widely utilized to reduce the symptoms of various diseases such as diabetes mellitus (DM). Among the foods used to combat these effects are soluble fibres, mainly those rich in beta-glucans (BGs). Objective: To review the effects of beta-glucans (BGs) on glucose plasmatic levels of diabetic individuals. Design: A search was conducted using the Pubmed, Science Direct and Scielo databases using the keywords: diabetes mellitus and beta-glucan and glucose and glycaemia. As inclusion criteria, only studies on diabetic human individuals (type 1 or type 2) who consumed BGs were selected. Results and Discussion: Of the 819 initial articles retrieved, only 10 fit the inclusion criteria and were used in the study. It was observed that doses around 6.0g/person/day, for at least 4 weeks were sufficient to provoke improvements in the blood glucose levels and also lipid parameters of individuals with DM. However, glucose levels do not reach normal levels using BG alone. Low doses of BG for at least 12 weeks were also reported to promote metabolic benefits. Conclusions: Based on previous research, it was concluded that the ingestion of BGs was efficient in decreasing glucose levels of diabetic patients. The consumption of greater doses or smaller doses for longer periods of time produced better results.

Keywords

Metabolic syndrome, Diabetes Mellitus, Polysaccharides, Glucans, Barley.