

# Does Natural Honey-Containing Fructose have Benefits to Diabetic Patients?

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Dear Editor,

We are writing to express our concerns about a review article published in this journal. The article, written by Ajibola (1), discussed the benefits of natural honey for improving health outcomes and provided a systematic view of the use of honey as a complementary and alternative medicine (CAM) to treat medical illnesses.

There is no doubt that the aim of diabetic treatment is to maintain and stabilise blood glucose within the normal range. Nevertheless, the author of this review includes a report that suggests that patients with diabetes must be discreet in consuming natural honey since it can cause instability of blood glucose levels. Furthermore, this article presents a plausible argument regarding the disadvantages of natural honey to diabetic patients, particularly when patients consume inappropriate doses of natural honey, adulterated honey containing 70% artificial sugars, or honey composed of a higher concentration of glucose than fructose (2,3). However, the latter argument is controversial, as there are still debates about whether fructose can cause uncontrolled glycemia and trigger the symptoms of diabetes.

A systematic review and meta-analysis by Cozma et al. (4) resulted in some important findings with respect to the effect of fructose in diabetic patients. The authors concluded that compared to other carbohydrates, fructose has greater long term benefits for improving glycemic control and has no effect on insulin and fasting glucose. Moreover, unlike the work of Bahrami et al. (3), this study showed improvements in HbA1c levels as a result of fructose consumption. However, this review has several limitations, including the short duration (less than 12 weeks) and relatively low quality of most trials analyzed. Thus, larger and longer studies are recommended.

In addition, other studies have presented the disadvantages of consuming high amounts of fructose, which may worsen diabetic patient status. It was discussed that fructose considerably increases body weight, elevates blood triglycerides

and uric acid levels, and causes the alteration of hepatic glucose output. Dietary fructose is likely responsible to lead to a decrease in hepatic ATP concentrations, consequently causing hepatic cellular injury and increased the risk of hepatic fibrosis (5,6).

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