

# THE INFLUENCE OF THE EXTRACT FROM THE STEVIA LEAVES ON THE DIABETES DEVELOPMENT

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**Introduction.** The International Diabetes Federation (IDF) in 2014 published updated figures showing that more than 382 million people are sick for diabetes worldwide. For the treatment of mild forms of diabetes commonly used medicinal plants. One such plant is *Stevia rebaudiana*. In addition, given that the main component of the extract, stevioside is sweet, but non-nutritive substance, it becomes a good sugar substitute for diabetics. The traditional therapy of diabetes is based on the use of hypoglycemic medications and insulin. At the same time, the arrival of xenobiotics in the human organism is a potent activator of microsomal processes and, therefore, free radical oxidation.

During some preliminary investigations we have found the hypoglycemic effect of stevia. However, it has been shown that the stevia has no hypoglycemic action for people without diabetes. This adaptogenic effect determines the safety of the plant. While studying the hypoglycemic effect of an aqueous extract from the leaves of stevia per os injected to the animals with alloxan diabetes, a dose-dependent effect has been detected. Supplementation in the rats diet, containing large amounts of carbohydrates, 0.1% stevioside solution has resulted in a reduction of glycogen levels in a liver but has no effect on blood glucose. When the experimental animals have been given the food with a high fat diet supplemented with 0.1% stevioside solution, we have found no changes in those indicators that have been observed in the animals that have not been treated with stevioside. A diet of a high amount of carbohydrates with 10% of the powder from the leaves of *Stevia* has induced a significant decrease of glucose level in blood and glycogen in a liver within 4 weeks of use.

Plant polyphenols, which contained in stevia, normalize glucose, insulin, fatty acids and triacylglycerols in the rats with the experimental diabetes of the first type. Moreover, diterpene glycosides promote the normalization of glucose concentration in blood and restoration of impaired metabolic process that facilitates the course of diabetes; they have the ability to feed the pancreas, restoring its normal function.

**Conclusions.** It should be noted that the hypoglycemic effects of the medications of stevia are not always observed, and it is often short-lived and requires a further study. But nowadays we have found out that the product is useful for diabetics. Thus, the use of the remedy derived from stevia, can be justified, and appropriate in the complex therapy of diabetes.