

Commentary on Hypoglycemic Effect of Honey

Abstract

Honey is a natural substance with many medicinal properties, including antibacterial, hepatoprotective, hypoglycemic, antioxidant and antihypertensive effects. It reduces hyperglycemia in diabetic rats and humans. However, the mechanism of its hypoglycemic effect remain unknown. Honey comprises many constituents, making it difficult to ascertain which component contribute to its hypoglycemic effect. Nevertheless, available evidence indicates that honey consists of predominantly fructose and glucose.

Keywords: fructose • honey • hypoglycemic effect • diabetes • liver

Introduction

Honey have medication, hepatoprotective, hypoglycaemic with numerous healthful properties that embrace antibacterial drug inhibitor The presence of aldohexose more enhances levulose Honey could be a natural substance effects . It includes primarily levulose and aldohexose together with different bioactive constituents like various phenolic resin compounds, flavonoids, organic acids, enzymes and vitamins . The levulose in honey is found to vary from twenty one.0% to 43.5%, whereas the quantitative relation of levulose to aldohexose ranges from 0.46 to 1.62 .

These variations are due primarily to variations in floral sources, geographical origin and environmental condition factors . levulose is that the sweetest of all naturally-occurring and obtainable sweeteners or sugars. It has a glycemic index of regarding nineteen compared to it of aldohexose that is a hundred . plant product and honey have comparable glycemic indices, 61 and 58, severally. the target of this review is to summarize findings on the hypoglycaemic result of levulose. the info indicate that levulose enhances internal organ aldohexose uptake via activation of glucokinase and promotes synthesis and storage of animal starch via activation of animal starch synthase within the liver. The findings indicate that aldohexose and levulose would possibly exert a synergistic result within the viscus and duct gland. This would possibly enhance internal organ levulose absorption within the viscus and stimulate endocrine secretion within the duct gland. The studies reveal that levulose would possibly improve glycemic management freelance of its insulinotropic result.

Discussion and Conclusion

Carbohydrates ar hydrolyzed by the internal organ brush border hydrolases to generate monosaccharides (glucose, levulose and galactose) before they're absorbed. aldohexose and saccharose ar preoccupied via the SGLT1, a metallic element + /glucose (galactose) co-transporter. In distinction, levulose is transported across the top membrane by GLUT5 and/or GLUT2 via expedited diffusion, although some proof suggests uptake is also via transport.

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Absorption of these findings might be important in relevancy honey. this is often as a result of honey consists of primarily levulose and aldohexose. Hence, there's a clear stage that administration of honey would possibly increase the transcription of levulose transporter thereby enhances levulose absorption. The aldohexose in honey may additionally facilitate levulose absorption galactose is reborn to saccharose 1-phosphate by galactokinase. Metabolism of saccharose 1-phosphate, that is catalyzed by phosphoglucomutase, produces aldohexose 1-phosphate that then enters the glycolytic pathway. metabolism of levulose and aldohexose in the liver appears terribly relevant. this is often seeable of the very fact that honey is enriched in each levulose and aldohexose . As are going to be explained later, the liver is that the major website wherever levulose exerts its hypoglycaemic result. levulose is phosphorylated within the liver than the absorbed aldohexose , similar proportion of levulose and aldohexose in honey may additionally be phosphorylated within the liver.

Administration of levulose was according to extend internal organ aldohexose and levulose uptake, aldohexose 6-phosphate, levulose 1-phosphate, animal starch synthesis, animal starch deposition and internal organ give production within the liver of rodents or dogs. However, a study according that levulose (compared to glucose) failed to cut back or increase leptin level, whereas high levulose consumption (1.5 g fructose/kg body weight) was found to extend abstinence levels of leptin. These studies indicate that the presence of levulose will increase its transporter levels leading to

inflated levulose absorption. Besides, proof reveals that the presence of aldohexose enhances levulose absorption. The review conjointly presents findings that support a potential synergistic result of aldohexose on levulose in stimulating endocrine unleash from the duct gland.

Therefore, studies that investigate the potential role of levulose within the euglycemic and hypoglycaemic effects of honey ar guaranteed. Besides further studies that unravel the potential role of liver in mediating the hypoglycaemic result of honey ar counseled. With this review, we've got not excluded the prospect of a nonetheless to be known substance in honey contributory to improved glyceimic management.

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Conflict of Interest

No conflict of interest

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