

The Use of Herbal and Natural Supplements in Diabetes Therapy

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Abstract

The main treatment of diabetes includes insulin injection continuously to maintain blood glucose, but nowadays, the researchers following some adjunct natural therapy for diabetes. It is proved that Fenugreek seeds lower blood glucose in diabetes patients by insulinotropic action and pancreatic insulin-sensitizing effects. Therapeutic effects of Fenugreek are through modulation of insulin secretion by alkaloids. Dietary supplementation of 10 g Fenugreek/day in diabetes cases decreased insulin resistance. Type 2 diabetic cases fed ginger, glucose regulation, insulin secretion, and lipid profiles improved. Ginger can directly increase glucose uptake that may be beneficial in the management of type 1 and type 2 diabetes. Using cinnamon had significant effect on the blood glucose of type 2 diabetics after 40 days and cinnamon decrease the blood glucose of diabetic patients and inhibits glycogen synthase activity. The effective components of cumin are the inhibitor for α -glycosidase and aldose reductase in the carbohydrate metabolism. Using essential oil of cumin daily during 8 weeks cause to greater changes in insulin level, FBS, HbA1c. Nettle contains compounds that increase insulin sensitivity in muscle and fat cells, thereby increasing glucose uptake into these cells and subsequently lower blood sugar. Colocynth was administered three times a day in type 2 diabetes patients, and reduced fasting blood sugar and glycosylated hemoglobin, increased insulin secretion from pancreatic cells. Applying of the extract and the essential oil of *Lemon verbena* to diabetic patient's lower blood sugar as well as oxidative stress. Dry extract of milk thistle seeds reduces blood glucose by acting on glucose-6-phosphatase and inhibiting gluconeogenesis. It is proved that anethole in anise can control blood sugar levels and improve the function of the pancreas cells. The licorice extract has anti-diabetic and anti-inflammatory effects that help to lower blood sugar, prevent insulin resistance in type 2 diabetes. Anti-diabetic properties of Moringa may be due to effect on alpha-amylase and alpha-glucosidase, which are responsible for converting dietary starch into glucose and manage diabetes. Camel milk contains insulin like proteins, which can be absorbed from the intestine and may be an effective alternative for insulin to treat type 1 and 2 and gestational diabetes. Camel milk may prepare about 60% of the insulin in diabetic patients and reduce blood sugar and required insulin dose. Raw camel milk increases insulin secretion, reduces insulin resistance and improves the glycemic control in type 1 diabetes patients. Due to the side effects and temporary effects of chemical drugs, the use of herbal and natural drugs along with chemical drugs is recommended for diabetics. But more scientific studies are needed to confirm the effectiveness of herbal and natural supplements on diabetes cases.

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Biography

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