

Group 2: Antidiabetic effect of Astragalus Pal.

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Diabetes is a group of metabolic disorders described by hyperglycemia and abnormalities in carbohydrate, fat, and protein metabolism which resulting from deficiency in insulin secretion, insulin action, or both. The chronic hyperglycemia of diabetes is related with long-term injury, dysfunction, and defeat of different organs, especially the eyes, kidneys, nerves, heart, and blood vessels. The wide majority of cases of diabetes divided into two broad etiopathogenetic categories. In one category, type 1 diabetes, the cause is an absolute deficiency of insulin secretion. In the other, much more predominant category, type 2 diabetes, the cause is a combination of resistance to insulin action and an inadequate compensatory insulin secretory response. One class of drugs inserted in the management of Type 2 diabetes is represented by the inhibitors of α -amylase. The α -amylase enzyme is produced from the human saliva and pancreatic juice which plays essential role in the hydrolysis of starch and glycogen into simple sugars (glucose and maltose). This process leads to increase the sugar level in the blood, which stimulate the production of insulin from the pancreas to balance the blood sugar level by activating the sugar entry into the body cells. The inhibition of this enzyme leads to a decrease of blood glucose level, because the sugar is the form of carbohydrates which is absorbed through the mucosal border in the small intestine.