

# Antidiabetic effects of cinnamon oil in diabetic KK-Ay mice.

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## Abstract

The hypoglycemic effect of cinnamon oil (CO) in a type 2 diabetic animal model (KK-A(y) mice) was studied. The main component of CO was cinnamaldehyde, and other nineteen components were also determined. CO was administrated at doses of 25, 50 and 100mg/kg for 35 days. It was found that fasting blood glucose concentration was significantly decreased ( $P<0.05$ ) with the 100mg/kg group ( $P<0.01$ ) the most efficient compared with the diabetic control group. In addition, there was significant decrease in plasma C-peptide, serum triglyceride, total cholesterol and blood urea nitrogen levels while serum high density lipoprotein (HDL)-cholesterol levels were significantly increased after 35 days. Meanwhile, glucose tolerance was improved, and the immunoreactive of pancreatic islets beta-cells was promoted. These results suggest that CO had a regulative role in blood glucose level and lipids, and improved the function of pancreatic islets. Cinnamon oil may be useful in the treatment of type 2 diabetes mellitus.

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