

# Effect of auricular pellet acupressure on antioxidative systems in high-risk diabetes mellitus

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摘要

## Abstract

**OBJECTIVES:** Free radicals and lipid peroxides, both of which are easily formed in the diabetic state, play an important role in the development of diabetic complications. Antioxidative therapy may help prevent diabetic complications caused by lipoperoxidation and free-radical formation in diabetes mellitus (DM). A number of findings suggest that oxidative stress exists in persons with high-risk DM. Auricular pellet acupressure has reportedly been an effective treatment method for a variety of medical conditions, including anxiety, juvenile myopia, essential hypertension, and senile vascular dementia. However, its effects on antioxidative enzymes have not been elucidated. We therefore evaluated the impact of auricular pellet acupressure on antioxidative status in persons with high-risk DM. **SUBJECTS:** Our study involved 69 persons with high-risk DM, who were allocated either to undergo acupressure as active treatment for the experimental group or to a control group. **INTERVENTIONS:** The experimental group in the study received auricular pellet acupressure three times daily for 5 consecutive days. After a 2-day rest period, the procedure was performed on the contralateral ear. Acupressure was performed twice on each ear, with each application followed by its application to the contralateral ear, over a total treatment period of 20 days. The control groups did not undergo auricular pellet acupressure. **DESIGN AND OUTCOME MEASURES:** At the end of the 20-day period of treatment of the experimental group, blood was collected from all of the study participants for assay of serum superoxide dismutase (SOD) and catalase concentrations, as was also done for the control group. **RESULTS:** Serum concentrations of SOD ( $p < 0.05$ ) and catalase ( $p < 0.0001$ ) were significantly higher in the experimental group than in the control group. **CONCLUSIONS:** Our findings suggest that auricular pellet acupressure can increase the concentration of antioxidative enzymes in persons with high-risk DM.