

**RESPONSE OF BLOOD GLUCOSE LEVELS TO ACUPUNCTURE
TREATMENT FOR TYPE II DIABETICS**

A Capstone Project
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In Partial Fulfillment
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ABSTRACT

THE PROBLEM. This study was designed to address the effect of a specific acupuncture protocol on blood glucose levels in Type II diabetes patients. The purpose of this study was to find a way to use acupuncture as preventive medicine or lessen the burden of the cost of drug therapy for the treatment of Type II diabetics on the patient and society as a whole.

THE METHOD. To evaluate the potential efficacy of acupuncture's effect on blood glucose levels, a quasi-experimental design was used. This study consisted of paired measurements with a pre-test and post-test design on sixteen subjects. The paired measure included the baseline measurement and the other measurement was taken after the conclusion of the acupuncture intervention. The outcome variable was the change between these two measurements. Sixteen subjects presented to the clinic after an overnight fast and before any medication was taken. Another health care practitioner, assistant, or family member assisted in taking before-and-after blood glucose levels using a standard Precision Xtra blood glucose meter. The subject was pre-tested using a blood glucose meter and was immediately treated using the stated protocol with a needle-retention time of one-half hour. Then the subject was immediately post-tested using the same blood glucose meter. If the subject was also a control, they were pre-tested, waited for thirty minutes, and then post-tested. This post-test reading then served as the pre-test reading and the subject was then treated using the acupuncture protocol. The third blood glucose reading served as a post-test for this group. To compensate for natural weakness

in this research design, a null hypothesis was developed and tested using a two-tailed student's t -test.

THE RESULTS. Analysis of the data obtained indicated a rejection of the null hypothesis of no difference with a significant p -value greater than $p < 0.01$. A power analysis was then performed and the research outcome was accepted with a power of 0.88. This gives reasonable indication that the acupuncture protocol used for this study did significantly lower blood glucose levels in Type II diabetics.