

CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s)

Varun Salwan

Project Number

J1222

Project Title

How Does Mindful Meditation Affect the Blood Pressure and Heart Rate?

Abstract

Objectives

How Does Weight Affect Blood Pressure?

Abstract

Objectives/ Goals: My project was to determine how weight affects blood pressure in adults. I believe that as our weight or BMI (body mass index) increases, our blood pressure will go up as well.

Methods

Methods and Materials: I measured the BMI (derived from the weight and height of the individual) and checked the average blood pressures of 30 people (15 men, 15 women) with a blood pressure cuff. I checked the blood pressure on 3 separate occasions over 3 weeks. I excluded people who had a preexisting condition of high blood pressure or on any medications that would lower blood pressure.

Results

Results: The experimental results supported my hypothesis by showing that as the BMI increased, so did both systolic and diastolic pressures. In people who are underweight (BMI <18.5) the average blood pressure was 110/68, 118/74 in people with a normal BMI (18.5-24.9), 132/82 in overweight individuals (BMI 25-29.9) and 138/88 in the obese (BMI>30).

Conclusions

Conclusions: My conclusion is that as our weight (BMI) increases, so does our blood pressure.

Summary Statement

My project is about how mindful meditation can effect your blood pressure and heart rate in a positive way.

Help Received

My dad who is a doctor, Arvind Salwan, M.D.