



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Abdulkarim J. Alamad	Project Number J1701
Project Title Aroma Therapy: Fact or Fiction?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals This project was to determine whether aroma therapy of eucalyptus spearmint oil and lotion can really help to reduce a person's stress level or not.</p> <p>Methods/Materials A sphygmomanometer and an oximeter were used to determine the resting heart rate, blood pressure, and oxygen saturation levels of 20 subjects; 10 boys and 10 girls ages 18-25. This was done after the subjects were asked to sit and relax for five minutes. Subjects were then asked to rub eucalyptus spearmint body lotion on their hands and arms while smelling the oil vapor of the same scent from an oil warmer for a period of five minutes. After the five minutes were done, the subjects' heart rate, blood pressure, and oxygen saturation levels were measured again and recorded.</p> <p>Results Results showed that after the aroma therapy, the subjects' heart rate decreased by an average of 7.3 BPM. The systolic blood pressure decreased by an average of 6.5 mmHg. And the diastolic blood pressure decreased an average of 6.2 mmHg. As for the oxygen saturation percentage, it had a very insignificant average increase of only 0.3%.</p> <p>Conclusions/Discussion The results proved that the hypothesis was mostly correct. Aroma therapy decreased the stress level of the subjects as seen in the reduction of the heart rate and the systolic and diastolic blood pressure. The only part of my hypothesis that was proven wrong was that the oxygen saturation was not affected. I concluded that much more serious health problems affect a person's oxygen saturation levels and that it is not affected by stress or aroma therapy.</p>	
Summary Statement The effect of eucalyptus spearmint aroma therapy on the reduction of a person's stress level.	
Help Received My mother helped me to double check my entries for the tables and graphs. She also helped to make the board neat.	