



**CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY**

Name(s) Mahmoud J. Alamad	Project Number 35494
Project Title Relieve My Stress! What Works Better at Reducing Stress Level, Eucalyptus Spearmint Aroma Therapy or Chamomile Tea?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this project was to find out whether eucalyptus spearmint aroma therapy or chamomile tea work better at reducing stress level in adults. This was calculated by comparing which method better reduced heart-rate and blood pressure and increased the oxygen saturation. The hypothesis was if an adult is subjected to eucalyptus spearmint aroma therapy or drinking chamomile tea as a way of reducing stress, then the chamomile tea will work better at reducing stress level.</p> <p>Methods/Materials Twenty adult subjects ages 18-25 years were used, ten from each gender. Each was asked to participate on two different days. On the first day their resting heart rate, blood pressure, and oxygen saturation levels were measured and recorded. Then they were subjected to eucalyptus spearmint vapor from an oil warmer and asked to rub eucalyptus spearmint lotion on their hands and arms. Their vitals were measured again ten minutes after being subjected to the aroma therapy. On a different day, their resting vitals were measured again and recorded. This time they were given six ounces of chamomile tea to drink. Ten minutes later, their vitals were measured again.</p> <p>Results The results showed that chamomile tea reduced the heart-rate, systolic blood pressure, and diastolic blood pressure better than the aroma therapy. Oxygen saturation levels did not show significant change.</p> <p>Conclusions/Discussion In conclusion, this experiment proved that the hypothesis was correct. Ingesting chamomile tea worked better at reducing an adult's stress level than eucalyptus spearmint aroma therapy. Chamomile contains a flavonoid called apigenin that acts on the same parts of the brain and nervous system as anti-anxiety drugs as prescription benzodiazepines like Xanax.</p>	
Summary Statement What Works Better at Reducing Stress Level, Eucalyptus Spearmint Aroma Therapy or Chamomile Tea?	
Help Received Mom helped make the chamomile tea. She taught me how to use the sphygmomanometer, double checked my entries for the graphs, and helped glue paper on board.	