



**CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY**

Name(s) Erika Badalyan	Project Number 35349
Project Title Stress Relief from Laughter? It's No Joke	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective was to determine the effect laughter yoga has on perceived stress levels, blood pressure, oxygen saturation, and heart rate.</p> <p>Methods/Materials 25 human subjects met for 3 sessions over the course of 3 weeks: 12 teenagers, and 13 senior citizens. Each age group was divided in half: 6 human subjects were the control group and the other 6 were experimental (7 for senior citizens). Each session involved breathing and stretching exercises, simulated laughter, chanting, clapping, and meditation. The 40-minute control intervention involved discussing health-related topics with human subjects. Before and after the 40-minute laughter yoga class, the human subjects would take a stress questionnaire, measure their blood pressure with a sphygmomanometer, and measure their oxygen saturation and heart rate with an oximeter.</p> <p>Results There was significant decrease in perceived stress scores, and increase in oxygen saturation, with an increase in oxygen saturation for senior citizens by 2% from an average of 95% for before to 97% for after, and for teenagers, the increase was also by 2%, with an average of 97% to 99%. For teenagers, stress levels were decreased by 72.31% ranging from 22/34 to 6/34 before and after the laughter yoga sessions.</p> <p>Conclusions/Discussion The hypothesis of the project was supported. Laughter yoga reduces perceived stress levels, improves blood circulation and oxygen saturation, and decreases blood pressure. The contributions of this project could be beneficial to schools and hospitals alike, laughter yoga classes could be a great stress-reducer for both teenagers and hospital patients.</p>	
Summary Statement This project is about beneficial effects of laughter yoga on perceived stress levels, oxygen saturation, blood pressure and heart rate.	
Help Received Teacher advised on research guidelines; Mom assisted with purchasing equipment	