



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Courtney A. Wicks	Project Number J1726
Project Title Hamming It Up: Is Laughter the Best Medicine?	
Objectives/Goals My project was to determine if laughter had an affect on blood pressure, heart rate, oxygen saturation and/or blood glucose.	
Abstract Methods/Materials Twelve subjects were tested in two sessions each. The first session was the control session, where a non-emotional video was watched. The second session was the experiment session, where a humorous video was watched (laughter stimuli). Sessions were held at the same time each day, with instructions not to eat or drink anything after 1:00 pm. Vital signs were taken before and after each session using a blood pressure monitor, oximeter, and glucose meter. Subjects completed a questionnaire to identify any possible variables; such as medication, or illness. Subjects' behavior was observed and documented during both sessions, for possible unanticipated reactions. The pre and post session vital signs were recorded and differences noted. The differences for the experiment session were compared with the differences for the control session to arrive at the difference attributed to laughter (example: control session decrease in oxygen saturation of 1, experiment session increase in oxygen saturation of 2 = net difference attributed to laughter of +3).	
Results Out of the twelve research subjects; 75% showed an increase in systolic blood pressure (overall average increase of 12), 75% showed an increase in diastolic blood pressure (overall average increase of 18), 58% showed an increase in heart rate (overall average increase of 13), 58% showed an increase in oxygen saturation (overall average increase of 1), and 60% showed a decrease in blood glucose (overall average decrease of 1).	
Conclusions/Discussion The data and research prove that laughter does affect blood pressure, heart rate, oxygen saturation and blood glucose. Specifically, my experiment showed the hypothesized increase in the following vital signs: systolic pressure, diastolic pressure, heart rate and oxygen saturation. While the research data did not show any specific study indicating the affect of laughter on blood glucose, the experiment for blood glucose did show the majority of subjects resulting in a decrease of blood glucose as hypothesized.	
Summary Statement My experiment proves that laughter has a short term affect similar to exercise on the human body.	
Help Received My teachers, Mr. Rex and Mrs. Priest, helped me with my research report, my 12 research subjects who put in several hours and agreed to poke their fingers, my mother supervised the experiment & use of medical equipment, instructed me how to use Excel to create charts and graphs, and helped with graphics.	