



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> Sarah T. Silverstein	<b>Project Number</b> <b>S0322</b>
<b>Project Title</b> <b>A Longitudinal Study of Stress in First Year Dental Students</b>	
<b>Abstract</b> <b>Objectives/Goals</b> Life changes and daily hassles lead to stress which can negatively affect performance and health. This longitudinal study examines change in stress over time in first year dental students at four US schools. It is hypothesized that the sources of stress will change over time and that stress will increase. <b>Methods/Materials</b> 12 dental schools were contacted; 4 participated. Students completed a survey with the Dental Environment Stress (DES) questionnaire, Perceived Stress Scale (PSS), a stress rating and demographic questions at the start of school (Time 1) and 11.7 weeks later (Time 2). <b>Results</b> Of 407 first year students, 397 (97.5%) completed least one survey; 212 (52.1%; n=130 men, n=82 women) completed both. Average age was 24.6. Stress ratings for DES items related to school work and lack of relaxation were high at Time 1 and increased significantly at Time 2 ( $p < .0001$ ). DES items related to school atmosphere had low stress ratings at Time 1 but had large increases over time ( $p < .0001$ ). Personal factors had low stress ratings both times. All three stress scale scores increased over time (DES $t = -5.98$ ; PSS $t = -6.26$ ; stress rating $t = -6.14$ ; $p < .0001$ ). Stress scale scores varied ( $p < .0001$ ) between schools at Time 1, but only small differences remained at Time 2. Stress scores were higher for women, and for younger and single students. <b>Conclusions/Discussion</b> My hypotheses were supported. Stress, both general and specific to dental school, increased over time. Sources of stress also changed. Although school work was stressful at both time points, elements in the school atmosphere became important sources of stress over time. Expectations related to teaching approach used at a school may modify initial stress levels but has little effect later on. Gender, age and marital status also affect stress.	
<b>Summary Statement</b> This project examines change over time in stress among first year dental students at four dental schools using multiple measures of stress.	
<b>Help Received</b> Dr. Wotman, Dr. Lalumandier, Mr. Aftoora at Case Western, Dr. Yarborough at University of the Pacific, Dr. Simonson & Mr. Leung at Arizona School of Dentistry & Oral Health, Dr. Shuler at USC administered stress surveys. Dr. Silverstein helped initiate contact. Dr. Kritz-Silverstein taught statistics.	