



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Dylan P. Whitaker	Project Number J0513
Project Title Drink This, Not That! Carbohydrate Containing Drinks Decay Teeth Even When Brushing Twice a Day	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My goal was to determine which common carbohydrate-containing beverage caused the most tooth decay and if brushing the recommended 2 minutes twice a day would be protective.</p> <p>Methods/Materials Discarded baby teeth (my own) were placed in various carbohydrate-containing beverages for 30 days. Common drinks available to children and teens were used including cola, clear soda, Gatorade, apple juice, and milk. Water was used as the control. The fluids were changed nightly. The teeth were brushed twice a day for 6 seconds each to equal 2 minutes total for the whole mouthful of teeth; matching the American Dental Association's recommendations. A separate baby toothbrush and child toothpaste were used for each type of beverage. Each tooth was weighed and pictures were taken weekly to track decay progress. Data was analyzed using computer graphing.</p> <p>Results Milk and Gatorade caused equally most damage with 69% tooth loss, and all liquids caused at least 16% more decay than water.</p> <p>Conclusions/Discussion Although my hypothesis was not supported, cola did not show the most decay, the experiment did support the statement made by Dr. Craig Hollander D.D.S., M.S., that "any beverage other than water can cause cavities". Cola is often removed from schools in California, but milk is frequently served as part of school lunch and students may bring juice or other sugary drinks, dental health could be improved by schools offering teeth cleaning opportunities and access to dental health websites.</p>	
Summary Statement Which carbohydrate-containing beverage will cause the most tooth decay, even when teeth are brushed 2 minutes twice a day?	
Help Received Mother: supervised and guided research, checked product design and math, typed and helped with some pictures	