



CALIFORNIA STATE SCIENCE FAIR

2015 PROJECT SUMMARY

Name(s) Clara E. Luisetti	Project Number J0514
Project Title The Effects of Household Drinks on Teeth	
<div>Objectives/Goals<p>The purpose was to see which beverage would cause the most enamel to break down and staining on a human tooth. It was assumed that weight loss of the tooth directly correlated with the amount of enamel loss. The hypothesis was that the tooth immersed in Diet Pepsi would have the greatest percentage weight loss and change in color.</p></div> <div>Abstract<p>Baby teeth were collected from one subject. The teeth were from a 41 year old who lost her teeth between the ages of 6 and 16. The teeth were selected based on weight, size, and similarity. Ten of the teeth were chosen as samples for the experiment. Two tablespoons of Gatorade, Diet Pepsi, orange juice, milk, and water were measured into five different containers labeled Owls. This process was repeated for five different containers labeled Teenage Mutant Ninja Turtles. Then the ten sample teeth were paired according to size and weight. The pH of each liquid was recorded. The pairs were then placed in the same beverage. The weight of each tooth was recorded and observations of color change and visible tooth decay were recorded.</p></div> <div>Methods/Materials<p>Baby teeth were collected from one subject. The teeth were from a 41 year old who lost her teeth between the ages of 6 and 16. The teeth were selected based on weight, size, and similarity. Ten of the teeth were chosen as samples for the experiment. Two tablespoons of Gatorade, Diet Pepsi, orange juice, milk, and water were measured into five different containers labeled Owls. This process was repeated for five different containers labeled Teenage Mutant Ninja Turtles. Then the ten sample teeth were paired according to size and weight. The pH of each liquid was recorded. The pairs were then placed in the same beverage. The weight of each tooth was recorded and observations of color change and visible tooth decay were recorded.</p></div> <div>Results<p>The results of data collected showed that milk and Gatorade caused the most percentage weight loss. The Gatorade had an average weight loss of 12.5% and the milk average weight loss was 14.4%. The water and Diet Pepsi caused no measurable percentage of weight loss. It was thought that the tooth in orange juice gained weight from the pulp sticking to the teeth. The Gatorade and Diet Pepsi caused significant staining on the teeth.</p></div> <div>Conclusions/Discussion<p>In conclusion, the drink that caused the greatest percentage weight loss and dental erosion was milk. The data results disagreed with the hypothesis, but the observational results supported it. Based on the results, teeth are better off with water during and after events such as meals, sporting events, and parties. If acidic, sugary and colored drinks such as Gatorade, milk, and Diet Pepsi are consumed, teeth should be brushed really well afterward to keep them white and free from erosion.</p></div>	
Summary Statement <p>This project is about the negative effects of household drinks on teeth.</p>	
Help Received <p>My mom helped me take pictures and enter them into the lab journal that I created. She also showed me how to graph results on a computer.</p>	