CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY

Name(s)

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Project Number

36070

Project Title

Bristly Clean Bristles

Abstract

Objectives/Goals

The objective of this study was to determine the best way to wash your toothbrush using commonly used methods and the American Dental Association's recommendation.

Methods/Materials

10 Toothbrushes, 20 Agar prepped Petri Dishes, 20 Cotton Swabs, Sterile Gloves, Hydrogen Peroxide, Crest Pro Health Mouthwash, Hot Tap Water, Salt Water, Baking Soda Water, Microscope, Notebook

Results

The results showed that all variables except for hot tap water caused some type of bacteria by 48 hours. The variables of baking soda water, Crest Pro Health mouthwash, salt water and hydrogen peroxide were very inconsistent. However, the variable of hydrogen peroxide actually added more bacteria. After 48 hours, the only one that had little to no effect was hot tap water.

Conclusions/Discussion

This experiment showed similar results to the American Dental Association's recommendation that while there is evidence to show bacteria grows on your toothbrush there is no consistent evidence to show that soaking your toothbrush in any type of rinse makes a significant difference. Therefore, the slightly best way to clean your toothbrush may be to use hot tap water and follow the American Dental Association's recommendation to rinse in water and change your toothbrush at least every 3 to 4 months for better bristly clean bristles.

Summary Statement

This experiment tested how to properly clean your toothbrush to avoid growing more bacteria and despite some inconsistent results, found that rinsing it in hot tap water is the best way to have more bristly clean bristles.

Help Received

I researched information from several sources, especially the information provided by the ADA, and used an experiment found on education.com website. I spoke with my dentist to get better understanding of how bacteria impacts your teeth and health. My mom helped me buy materials and checked my spelling.

Preliminary