CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY

Name(s)
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Project Number
J0615

Project Title
Gas: Which Beverages Release the Most Gas and How Does It Affect the Stomach?

Abstract

Objectives/Goals
To see which beverage would release the most gas and how it would affect the stomach.

Methods/Materials
EXPERIMENTAL METHOD: 1) Pour equal amounts of beverages in each plastic bottle. 2) Mix 2 tsp. of vinegar in each bottle to represent stomach acid. 3) Blow up balloons first to stretch them out, so they will be easier to expand. 4) Put the open end of the balloon over the opening of each plastic bottle. 5) Place each plastic bottle on the heating pad. 6) Watch the balloons as they heat, and document which balloon is expanding the most. 7) Pick which beverage or beverages cause the balloon to expand the most.

Results
RESULTS: The coke made the balloon expand the most. The orange juice expanded slightly and the water and milk didn't expand at all.

Conclusions/Discussion
CONCLUSION: My hypothesis was half right. The coke did blow up the balloon first and the biggest like my hypothesis said, but so did the orange juice. The orange juice only blew up the balloon slightly. The coke blew up the balloon, because it has carbonation in it which is carbon dioxide, and the gas bubbles are being released outside the coke into the balloon. The orange juice only blew up slightly because of the sugar breakdown releasing a little bit of gas. Milk and water did not blow up the balloon because neither one contains any gas and is easily broken down in the stomach, unless your lactose-intolerant and then the milk will have problems breaking down.

Summary Statement
Which beverage will release the most gas and how it affects the stomach.

Help Received
My mom helped me with typing, internet research, and providing her opinion on my board.