Name(s) Adel M. Kamal	**Project Number** # J0408

Project Title

Feel the Burn

Abstract

Objectives/Goals
My goal was to research what is more effective in reducing acidity in the stomach: avoiding acidic food, or taking an antacid? My Hypothesis was that avoiding acidic foods was more effective.

Methods/Materials
I blended hamburger, fries, and water. I measured the pH of that mixture with a pH meter. I added acidic foods such as Coke, Orange Juice, Milk, Coffee and Advil to the mixture and measured the pH. Lastly, I added Mylanta, a hydroxide, measured the pH again, and compared it to the original reading of the food mixture. If the pH reading after adding the Mylanta was higher i.e. less acidic, then taking Mylanta was more effective, but if the Mylanta fails to do so then avoiding the acidic food is more effective.

Results
The results depended on the acidity of the food. In the case of Coke and Advil, Mylanta brought the pH to a higher level than the original pH of the food mixture and in Orange Juice it did not.

Conclusions/Discussion
My Hypothesis was partially correct. It was interesting to see that the pH of the sandwiches ranged from 5.4 to 5.67 and that the most acidic food I used was Advil (2.75). pH is an acronym for Potential Hydrogen. It is a measurement of acidity. The more hydrogen ions there are in a substance the more acidic it is. I learned that the Hydrogen Oxide from a base will neutralize the Hydrogen ion from an acid thus reducing the acidity. In my research I learned about causes, diagnosis, and treatment of Gastro-Esophageal Reflux Disease (GERD). It occurs when gastric acid goes to the esophagus causing heartburn. It affects 8% of Americans. If left untreated it could lead to esophageal cancer.

Summary Statement

The focus of my project is to demonstrate the importance of changing eating habits of individuals with Gastro-Esophageal Reflux Disease (GERD).

Help Received

Mother helped with buying and preparing the food mixture.