CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY

Name(s)
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Project Number
J0618

Project Title
Ouch... Pain

Abstract

Objectives/Goals
In my experiment I tested whether aspirin, naproxen, or ibuprofen will keep the pH the same and also dissolve in the fastest time.

Methods/Materials
Hydrochloric Acid, .01 m
Spoon- 1
Googles -1
Cup- 20
Advil- 5 tablets
Aleve- 5 tablets
Ecotrin- 5 tablets
Motrin- 5 tablets
Gloves- 1 pair
pH strip- 40
Measuring cup
Stopwatch

Results
The pH was around fairly consistent between the three different pain killers.

Advil took the least time, as well as Aleve taking the longest

Conclusions/Discussion
In my experiment I tested whether aspirin, naproxen, or ibuprofen will keep the pH the same and also dissolve in the fastest time. Advil was the fastest and kept the acid at 7.3. Ecotrin came in second and also did well in neutralizing stomach acid. Motrin was very close to being second but the time for the pill to dissolve was a little too much. Finally, coming in last in a long way was Aleve who's pill dissolved last and didn't do well in neutralizing stomach acid. The reason Advil was first and Motrin was very close to being second was because they are made up of the same chemical compound. I believe that they dissolved fast because the 18 hydrogen atoms bonded with 2 oxygen atoms, causing it to become liquid. Ecotrin also may have taken less time since it was a smaller pill then the other three and it did a pretty well job in neutralizing the pH. Aleve did last because it is an uneven compound at it may have taken a longer time to

Summary Statement
Which aspirin, naxproxen, or ibeprofen neutralizes the pH in you stomach in the fastest amount of time

Help Received
Dr. Patel