CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)
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Project Number
J1432

Project Title
Effects of Pain Relievers and Cough Syrups on the Development of Frog Eggs

Abstract

Objectives/Goals
The Objective is to determine if adding pain relievers and cough syrups into the frog eggs habitat. Will this increase or decrease the growth rate of the frog eggs?

Methods/Materials
I used 5 different pain relievers, cough syrups, and a control. With each of these,I made 1:10 and 1:100 dilutions. In each of these tests, I had 50 test samples (10 cups with 5 eggs in each). I measured on a daily basis the hatch rate of frog egg to tadpole.

Results
My results have shown that adding medication to their environment will hinder or slow the growth rate from egg to tadpole. The control specimens have shown the most rapid growth rate of all. They began hatching in 24hrs and had completely hatched in 48hrs. By 7 days in the 1:10 dilutions, there was no growth in the Ibuprofen and Tussin samples. The Tylenol, Aspirin, and Triaminic tests have shown near 50% growth. By 7 days in the 1:100 dilutions,
there was no growth in the Ibuproben tests. In the Tylenol,Aspirin,Triaminic, and Tussin tests,there was near 85-90% growth.

Conclusions/Discussion
Pain Relievers and Cough Syrups aid in the overall health of humans. I wanted to see if adding these substances would increase growth rate. I found that adding these substances hindered the growth rate. The medications were not toxic to the eggs since most all eggs changed to tadpoles. Some of the eggs did die but overall the eggs were healthy and durable. This project has shown me that medications may be beneficial in maintaining health but they have no
benefit in enhancing the growth rate of frog eggs.

Summary Statement
To determine if the growth rate of frog eggs to tadpoles is effected by the addition of medications.

Help Received
Mother helped with the board and some of the typing