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The Effects Of Over The Counter Medication On Fruit Flies

This project was to see if over the counter medications could affect the reproduction and mutation rate of fruit flies if it became part of their diet. I wanted to see how two different over the counter medications compared in regards to mutations and reproduction. The flies were bred in a standard vial with provided medium as a food source from the fly company. There were three populations of flies, Tylenol, Ibuprofen, and control. Medication was added to the medium of the two test group vials. Mutations were counted individually under dissect-a-scope after 10-12 days of breeding. The populations were counted every several days and a final population was counted during the mutation investigation. The final results showed that even though the Tylenol population grew faster than the Ibuprofen vial, in the end it showed the fewest flies and the most mutations of three groups. The Ibuprofen grew slower but fluctuated in the end, giving it the largest population and the fewest mutations of all three groups. Overall, I concluded that Tylenol medication negatively effected fruit fly reproduction and increased the rate of mutation. Ibuprofen did not negatively effect the flies. My results were contrary to the current recommendations for over the counter medication use in pregnancy. This research suggests that Tylenol negatively affected the fruit flies, and maybe more studies should be done testing Tylenol use in humans and/or pregnancy.