CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY

Name(s)
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Project Number
J2215

Project Title
Cell Phone Microwave Radiation: Does It Zap the Lifespan of the Fruit Fly?

Abstract

Objectives/Goals
The objective of this study is to measure the lifespan of larvae and adult fruit flies exposed to cell phone microwave radiation.

Methods/Materials
24 larvae fruit flies and 24 adult fruit flies were exposed to "airtime on" cell phones (either a Samsung Galaxy or Casio GZ which have different specific absorption rates) for 10 or 20 minutes daily compared to no airtime for controls.

Results
The Samsung cell phone exposed larvae fruit flies had a 35% reduction in lifespan compared to the controls while the Casio exposed larvae fruit flies had a 50% reduction in lifespan compared to controls. The adult fruit flies showed no major reduction in lifespan for the Samsung exposed group. However, for the Casio 20 minute exposed adult group there was a 30% reduction in lifespan.

Conclusions/Discussion
Larvae fruit flies are more vulnerable to cell phone radiation as shown by their significantly decreased lifespan whereas the adult fruit flies seem minimally affected. Therefore, cell phone microwave radiation exposure is potentially more harmful to the health of young and developing organisms.

Summary Statement
I found that the young (larvae) fruit flies exposed to cell phone microwave radiation had a significantly decreased lifespan compared to the adult fruit flies that received the same exposure.

Help Received
I designed and conducted the experiments by myself with guidance from my father (Ruvdeep Randhawa) and science teacher (Bobbi Goldstein).