The Effect of Electromagnetic Radiation similar to that Released by Powerlines on the Time to Hatch of Silkworm Eggs

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There is much concern over the possible effects of power line radiation on the fetus. Power lines emit about .1 Gauss (G). Most scientists believe that power line radiation can harm the fetus. Between the ages of eight and fifteen weeks the embryo is believed to be most sensitive to radiation exposure. My question is, how does electromagnetic radiation emitted by power lines affect the incubation rate of lacewing eggs? My experiment is designed to test how power line radiation affects the embryo. If silkworm eggs (Bombyx mori) exposed to different levels of electromagnetic radiation are compared, then, the group exposed to the highest amount of radiation will have the shortest incubation time. A total of 120 silkworm eggs were divided into three groups, each exposed to different levels of radiation by means of an electromagnet; 0 Gauss, .1074 G, and .1591 G. Hatching was recorded for seventeen days. I compared the time to hatch to EMF exposure strength levels using Pearson-product moment correlation coefficient. I compared the number of eggs hatching using z score. My results show that silkworm eggs had the shortest hatching time in the group exposed to the most radiation and the slowest hatching rate in the group exposed to no radiation. From this data I conclude that radiation reduces the hatching time of the egg. For future experiments I intend to grow human skin cell cultures in a special facility and expose these cultures to EMF radiation similar to that emitted by power lines.

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