Investigating the Potential Impact of Tea Consumption on the Longevity of Drosophila melanogaster

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In many parts of the world, tea has been attributed as a beneficial supplement for improving health and the longevity of life. This project aims to investigate if tea infused food will influence the longevity of Drosophila melanogaster. It was hypothesized that black tea infused food would be the best to prolongate the longevity of the fruit fly life, because of known abundancy in phytochemicals. In this experiment one-week-old fruit flies were divided into control and experimental groups. The experimental group consumed fruit fly food infused with black, green, and chamomile tea. While the control group consumed the standard fruit fly food prepared with water. An equal number of fruit flies were transferred into plastic vials with their respective food treatment (2 groups for each type of tea and into 3 groups for the control) and then placed in an incubator at a temperature of 22°C. The number of living and dead fruit flies in each group was recorded weekly when new food was provided, and observations of fruit fly activity were taken over 5 weeks. It was shown that black tea was the most efficient in prolongating the longevity of this fruit fly species. Only 2 fruit flies died in a span of 5 weeks and there was evidence of reproduction between the flies, on a black tea-based diet. Therefore, the hypothesis can be accepted. This work contributes to the scientific literature on looking at tea as a key supplement for the longevity of life.