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## **Acute Exposure of Arsenic Affects Fecundity and Reproduction in *Drosophila melanogaster***

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**ABSTRACT** Arsenic-contaminated groundwater has been a matter of concern worldwide, especially in developing countries like India. High levels of exposure to arsenic have been linked to a wide range of neuronal, cardiac, dermatologic, and malignant disorders. However, few studies have focused on examining the relationship between arsenic exposure and reproductive health outcomes. The aim of this study is to examine the effects of inorganic arsenic on female fruit flies' reproductive ability. The *Drosophila melanogaster* could be used as a good model for studying the effects of Arsenic on female fecundity because of its advantages like short life cycle, high fecundity (egg-laying), genome similarity with humans, and ease of maintenance in the lab. Results of the study document the decline of young female flies' fertility and fecundity in a dose-dependent manner. The findings from this investigation may support the role of arsenic exposure in increasing the risk of infertility in females.