Effects of E-Cigarette and Vaporizer Exposure: Mucous Membrane and Developing Tissue Studies

Alam, Megan

Steward, Juliana

The purpose of this project was to determine the effects of new forms of smoking apparatuses such as electronic cigarettes (E-Cig) and vaporizers (V-Cig). The project was divided into three segments. The first segment was a survey which was used to ascertain the most frequently used brands, ages and amount smoked. The second segment consisted of a chicken embryo model to determine the effects of vaporizer smoke on developing tissue. The third segment was a earthworm experimentation to test whether or not mucous membranes are affected by the vapors and chemical components contained in E-Cigs and V-Cigs. Results from the survey found a significant portion of the general population smoked. The most popular mediums were tobacco cigarettes and vaporizers. Embryo development data was suggestive of, but not definite proof of, reduced birth weight as well as premature birth due to harmful vapor. Mucous membrane experimentation results yielded clear signs of lethargy from worms affected by tobacco smoke and vaporizer cigarette vapor, but no notable changes in outward appearance. These findings have great importance as they demonstrate the need for further necessary research and potentially greater government oversight of alternative smoking products.

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