OFFICIAL ABSTRACT and CERTIFICATION

A Meta-Analysis to Elucidate the Link Between Tocopheryl Acetate and Lung Illnesses of Vape Users

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A meta-analysis was performed to determine if, and possibly how, tocopheryl acetate (Vitamin E acetate) plays a destructive role through vaping. Several recent findings have been linking Vitamin E acetate to vape illnesses (https://www.vox.com/science-and-health/2019/11/11/20959198/vaping-vitamin-e-acetate) Vaping is the act of inhaling and exhaling the aerosol, often referred to as vapor, which is produced by an e-cigarette or similar device. When the device is used, the battery heats up the heating component, which turns the contents of the e-liquid into an aerosol that is inhaled into the lungs and then exhaled. There has been 1,479 cases of a mysterious lung disease over the last six months linked to vaping. At least 33 people have died since this outbreak began. (https://www.latimes.com/projects/vaping-deaths-long-term/.) This study aims to uncover whether tocopheryl acetate is an allergen or plays another role within lung tissue, specifically focusing on pneumocytes. Tocopheryl acetate is an ingredient which is normally found in cosmetic products and dietary supplements, but is not safe to inhale in its pure form. Thus, this study will examine the uses of tocopheryl acetate (Vitamin E acetate), recent findings linking tocopheryl acetate and vaping illnesses, (allergic) reactions to tocopheryl acetate, and the lung pathology under stressful conditions.

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