

# Study finds e-cigarette use linked to cough reflex sensitivity

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The popularity of electronic cigarettes has steadily increased worldwide, but little is known about their effects on health. New research suggests that the single use of an electronic cigarette approximating the nicotine exposure of one tobacco cigarette reduces the sensitivity of the cough reflex.

The study tested 30 adult lifetime nonsmokers with no history of asthma or [respiratory diseases](#) and used cough tests to determine how e-cigarettes affect the cough reflex. Capsaicin, the pungent extract of red peppers, was used to induce a safe cough in the subjects and establish their baseline cough reflex sensitivity prior to use of electronic cigarette. Each subject then inhaled 30 puffs of an electronic cigarette, which contains nicotine in a vehicle of distilled water. Fifteen minutes after the e-cigarette "vaping" session, subjects were tested again using the capsaicin cough challenge and then tested again after 24 hours. Based on a comparison of results, a significant decrease in cough reflex sensitivity was shown within the subjects as compared with their baseline levels.

The authors found that nicotine is probably responsible for the effect on the cough reflex. Prior research shows that nicotine also promotes cough immediately after ingestion, suggesting that nicotine has a dual action: an immediate stimulation of the [cough reflex](#) and a delayed inhibition.

**More information:** Effect Of Electronic Cigarette Use On Cough Reflex Sensitivity, *Chest*. 2015. [DOI: 10.1378/chest.15-0817](https://doi.org/10.1378/chest.15-0817)

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