

Study shows sense of smell is impacted by vaping

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Sensory changes may be an unexpected side effect of vaping, new University of Otago research shows. The study, carried out in collaboration with the National Institute for Health Innovation and

[published](#) in the journal *Appetite*, assessed the potential effects of vaping on the sense of taste and smell among young New Zealanders.

Lead author Dr. Jessica McCormack, of the Department of Food Science, says results show non-vapers find "sweet" smells more pleasant than vapers. There was no difference for taste or "savory" smell.

"Changes in smell and taste are often linked to [dietary changes](#), so it is important that we understand the effects of vaping long term, particularly in those who are not former or current smokers," Dr. McCormack says.

Participants were 213 people over age 18 who used vapes regularly, occasionally, or never. They were classified as vapers or non-vapers based on their use in the past six months.

"Another reason might be that [nicotine](#) enhances the reinforcement of stimuli, so in the absence of nicotine sweet smells might seem less pleasant."

During the study, they tasted and smelled different tastes and odors diffused in simple solutions.

"Participants rated the pleasantness and intensity of the smell and taste samples and did a simple sensory detection test where they had to guess between a plain water sample and the taste/smell at a very low concentration."

Dr. McCormack says the results are fascinating.

"We know smoking can be a cause of smell dysfunction and taste changes, but the mechanisms that cause smell decline in smoking might not necessarily apply to vaping, so it was really interesting that we found

a difference between our vapers and non-vapers that is consistent with studies of smokers.

"We still have more we need to know about what the mechanisms might be here—is it related to the use of flavors or nicotine or a combination?"

Sweet vape flavors are the most popular, so vapers may be overexposed to them, she says.

Senior author Dr. Mei Peng says, "These findings also have some implications on [vaping](#) effects on eating behaviors among the younger population. We hope to look into these effects in a future study soon."

More information: Jessica C. McCormack et al, Does vaping affect the taste and smell perception? An exploratory study with New Zealand young adults, *Appetite* (2024). DOI: [10.1016/j.appet.2024.107236](https://doi.org/10.1016/j.appet.2024.107236)

Provided by University of Otago

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