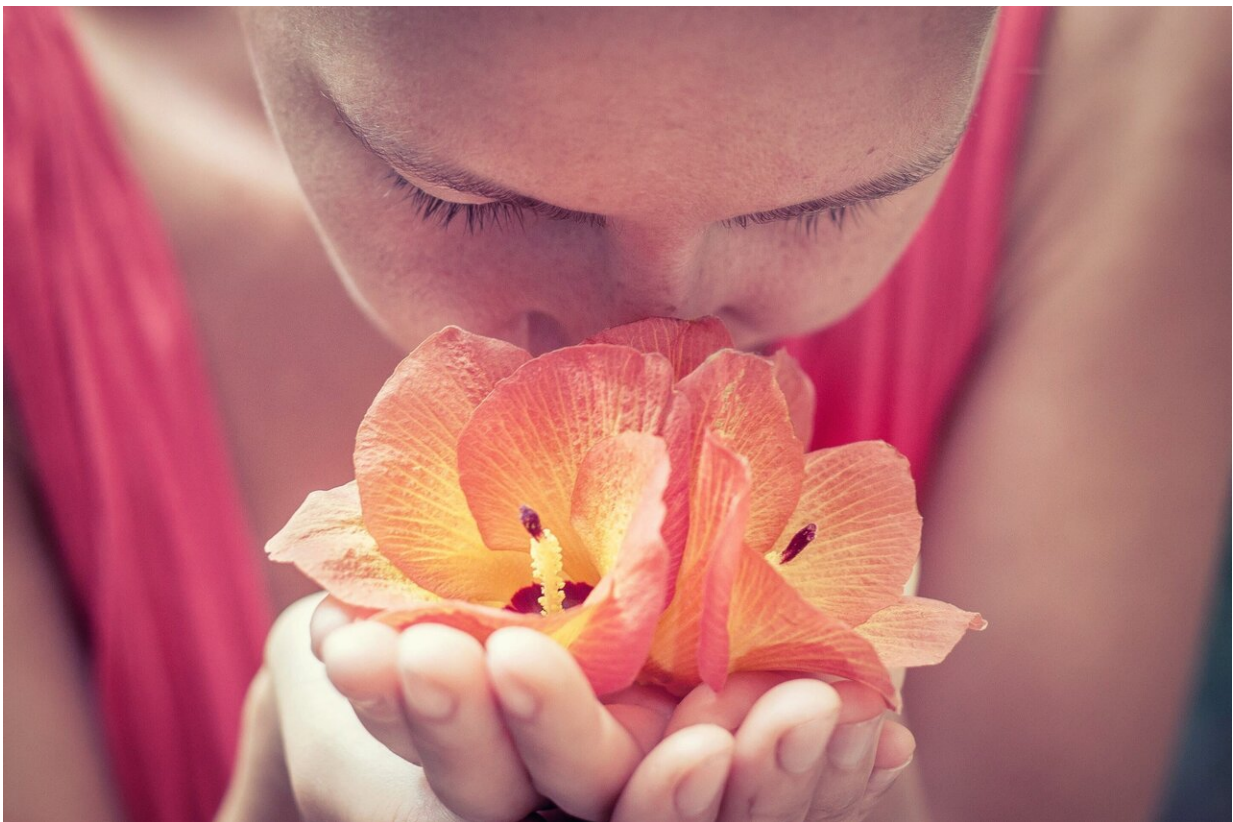


Millions of patients do not have full recovery of smell or taste senses after COVID infection, study finds

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During the COVID-19 pandemic, many patients experienced a loss of taste and smell during and after being infected with SARS-CoV-2. A

retrospective study by researchers at Massachusetts Eye and Ear, a member of the Mass General Brigham healthcare system, investigated the loss of olfactory and gustatory senses and estimated that about a quarter of Americans who had COVID-19 reported only partial or no recovery of taste or smell. The results are published in *The Laryngoscope*.

"We wanted to quantify the national impact of smell disorders resulting from COVID," said Neil Bhattacharyya, MD, FACS, Professor of Otolaryngology at Mass Eye and Ear. "With this data we can understand, in big numbers, how many people lost their [sense of smell](#) or taste due to COVID infection and how many people never fully recovered those senses."

The [retrospective study](#) utilizes data from the 2021 National Health Interview Survey (NHIS), a branch of the Centers for Disease Control (CDC), which includes [survey data](#) from 29,696 adults. In the NHIS data, COVID patients were asked about the severity of their symptoms, any loss of taste or smell, and their recovery of those senses.

The research team reported that about 60 percent of surveyed participants infected with COVID experienced a [loss of smell](#) and about 58 percent experienced loss of taste. Additionally, not all the patients experienced a full recovery of their senses once they recovered from their infection.

The study found that around 72 percent of patients fully recovered their sense of smell, but 24 percent only had a partial recovery and over 3 percent had no recovery of their sense of smell at all. Similarly, of those who experienced a loss of taste due to COVID, about 76 percent fully recovered the sense, while 20 percent only partially recovered and over 2 percent did not recover at all. That amounted to almost 28 million Americans potentially left with a decreased sense of smell after COVID

infection.

Bhattacharyya said one of the motivations for the study was a patient he saw who lost 50 pounds due to his COVID-related smell loss.

"The patient wasn't eating and became very sick and very depressed because of the loss of smell," Bhattacharyya said. "When you hear about COVID-related smell loss, you think most people get it back and are fine. But there is a substantial number of people who don't recover it."

The study also found that there is a correlation between COVID symptom severity and loss of smell or taste. As symptom severity increased, the percentage of patients with smell or taste loss also increased. Moreover, the likelihood of smell and taste sensory recovery also decreased with more severe COVID symptoms.

The authors noted that since smell and taste often work together, it may be difficult for patients to self-report which senses have or have not recovered. However, there remains a large population of patients who experience loss of smell and taste as an after-effect of COVID.

While the study is novel due to its national population sample, the dataset focuses only on patients treated in 2021. This means that patients before and after 2021 were not taken into consideration, and if an individual recovered their sense of smell or taste after 2021, it was not documented in the data. In addition, rates of loss of smell or taste due to infection from variants of COVID that arose after 2021 likely vary from the rates detected in this study.

Although there currently isn't a [standard treatment](#) for patients with smell and taste deficits, the researchers note these findings can help providers counsel patients who have lost their sense of smell or taste due to COVID and track recovery rates.

"The value of this study is that we are highlighting a group of people who have been a bit neglected," Bhattacharyya said. "Losing your sense of smell or taste isn't as benign as you may think. It can lead to decreased eating for pleasure and, in more extreme cases, it can lead to depression and weight loss."

More information: Margaret B. Mitchell et al, Smell and Taste Loss Associated with COVID-19 Infection, *The Laryngoscope* (2023). DOI: [10.1002/lary.30802](https://doi.org/10.1002/lary.30802)

Provided by Massachusetts Eye and Ear Infirmary

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