

# Are some foods super bitter to you? You might have lower COVID risk

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If you can't stand broccoli, celery or kale, you may be a supertaster, and it just might protect you from COVID-19.

Supertasters are folks who are highly sensitive to bitterness. They're not only less likely to get COVID-19 than people who aren't so sensitive to sharp, pungent flavors, they're also less likely to wind up hospitalized with it, researchers said.

What's more, supertasters in a new study experienced COVID-19 symptoms for only about five days, compared with an average 23 days among non-tasters.

Exactly how or even if taste affects COVID-19 risk isn't fully understood, but researchers do have a theory.

Bitter taste receptors—including one called T2R38—are found in the taste buds of your tongue.

"When T2R38 is stimulated, it responds by producing [nitric oxide](#) to help kill or prevent further replication of viruses in the [respiratory mucosa](#)," said researcher Dr. Henry Barham, an ear, nose, and throat specialist in Baton Rouge, La. These [mucus membranes](#) line your respiratory system and provide a point of entry for viruses, including SARS-CoV-2, which causes COVID-19.

"The results carry important implications, like allowing people to make more informed choices and potentially prioritizing vaccination administration," Barham said.

Several studies are looking at how [bitter taste receptors](#) affect risk for COVID-19 and other [upper respiratory infections](#), he added.

This study included close to 2,000 people (average age 46) whose ability to taste was tested using paper strips. All were tested before having COVID-19, as it could compromise their sense of taste and smell.

The participants were placed into one of three groups: Non-tasters, supertasters, and tasters.

Non-tasters are folks who can't detect certain bitter flavors at all. Supertasters, on the other hand, are extremely sensitive to bitterness and can detect exceedingly small levels. Tasters fit somewhere in between.

During the study, 266 participants tested positive for COVID-19. Non-tasters were much more likely than supertasters to get infected and were also more likely to have severe COVID-19.

Tasters were likely to display mild-to-moderate COVID-19 symptoms, often not requiring hospitalization. Those who had underlying conditions or were older with decreased ability to taste bitterness were the exception, the study found.

The findings were published online May 25 in *JAMA Network Open*.

Dr. Alan Hirsch, neurological director of the Smell & Taste Treatment and Research Foundation in Chicago, has spent his career studying the effects of lost smell and taste on disease. He reviewed the study results.

"The new findings make a lot of sense," he said. Hirsch suggested that folks would benefit from finding out their own tasting status.

"If you are unable to taste bitterness, you should be that much more careful and wear masks for a longer duration to protect yourself from COVID-19," Hirsch said. Unfortunately, he added, most people don't know which type of taster they are.

Home- and office-based tests can tell you where you fit on the [taste](#) spectrum.

But here's an easier option: "If celery tastes bitter to you," Hirsch said, "you're a supertaster, and if it doesn't, be careful."

**More information:** Henry P. Barham et al, Association Between Bitter Taste Receptor Phenotype and Clinical Outcomes Among Patients With COVID-19, *JAMA Network Open* (2021). [DOI: 10.1001/jamanetworkopen.2021.11410](https://doi.org/10.1001/jamanetworkopen.2021.11410)

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