

# Sensitivity to bitter tastes may be why some people eat fewer vegetables

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A specific gene makes certain compounds taste bitter, which may make it harder for some people to add heart-healthy vegetables to their diet, according to preliminary research to be presented at the American Heart Association's Scientific Sessions 2019—November 16-18 in Philadelphia.

"Your genetics affect the way you [taste](#), and taste is an important factor in [food choice](#)," said Jennifer L. Smith, Ph.D., R.N., study author and a postdoctoral fellow in cardiovascular science at the University of Kentucky School of Medicine in Lexington. "You have to consider how things taste if you really want your patient to follow nutrition guidelines."

Everyone inherits two copies of a taste gene called TAS2R38. People who inherit two copies of the variant called AVI aren't sensitive to bitter tastes from certain chemicals. Those with one copy of AVI and another called PAV perceive bitter tastes of these chemicals, however, individuals with two copies of PAV, often called "super-tasters," find the same foods exceptionally bitter.

"We're talking a ruin-your-day level of bitter when they tasted the test compound. These people are likely to find broccoli, brussels sprouts and cabbage unpleasantly bitter; and they may also react negatively to dark chocolate, coffee and sometimes beer," Smith said.

Researchers analyzed food-frequency questionnaires from 175 people

(average age 52, more than 70% female) and found that people with the PAV form of the gene were more than two and a half times as likely to rank in the bottom half of participants on the number of vegetables eaten. Bitter-tasting status did not influence how much salt, fat or sugar the participants ate.

"We thought they might take in more sugar and salt as flavor enhancers to offset the bitter taste of other foods, but that wasn't the case. Down the road we hope we can use [genetic information](#) to figure out which vegetables people may be better able to accept and to find out which spices appeal to supertasters so we can make it easier for them to eat more vegetables," Smith said.

Provided by American Heart Association

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