

A chewing gum to reduce the effects of COVID? Scientists say it's a real possibility

A type of chewing gum mixed with a protein that is a gateway for infections with the novel coronavirus, or SARS-CoV-2, could serve as a low-cost way to help prevent its spread, a recent study suggests.

The angiotensin-converting enzyme 2 (ACE2) protein, which is present on the surface of many human cells, can be mixed into chewing gum.

Conveyed into the mouth by the gum, ACE2 can then trap the virus by binding to its spike protein, which otherwise aids it in infecting cells. In addition, the protein in the gum can bind to cell-surface receptors, thereby blocking sites where the virus typically infects us.

The combination effectively [prevents the pathogen from infecting cells in the oral cavity](#), the researchers report.

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To study this strategy, a team led by University of Pennsylvania pharmaceutical researcher [Henry Daniell](#) modified lettuce plants to make them produce a soluble form of the ACE2 protein. A powdered form of the lettuce was then blended with sweet-tasting cinnamon-flavor chewing gum.

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The protein would be released over the course of about 10 minutes of chewing, Daniell found by modeling the process with a machine that generates the same force as typical human chomping. Protection would last for four hours, he estimates.

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