

A sniff for the sniffles? UMD's nasal spray could fight flu, COVID and colds

Meredith Cohn

2/4/2026 12:07 p.m. EST



A nasal spray that University of Maryland School of Medicine researchers are working on as a way to ward off flu and a range of other viruses at once. (ENA Respiratory)

What if that “immune boosting” nasal spray at the convenience store counter alongside energy shots and gum were a scientifically

Researchers in the University of Maryland School of Medicine are studying a version they say could protect people from a range of respiratory illnesses, including COVID-19 and common colds, by strengthening the body's first line of defense.

The nose.

It's a new approach to an old problem of seasonal infections, said Dr. Justin Ortiz, professor of medicine and respiratory illness specialist in the School of Medicine and principal investigator for the trial.

"It may not stop an infection," he said. "Hopefully this limits the consequences of an infection."

Called INNA-051, it's not a vaccine to build antibodies against a virus, but a drug that helps the body's natural defenses to have a similar response. It's being developed by the university along with the Australian pharmaceutical company ENA Respiratory.

The intent is not to replace vaccines, which public health experts still recommend. But there aren't vaccines for every virus. And not as many people have been getting the shots that are available since the coronavirus pandemic and changes in recommendations from federal health authorities.

Ortiz said weekly doses of the spray during a typical flu season could help offer protections to people, whether they were vaccinated or not.

Increasingly, researchers are turning to nasal passages as a route to increase a drug's effectiveness. There is already [a spray version](#) of the flu vaccine called FluMist and a spray version of the COVID-19 vaccine is in development.



Dr. Justin Ortiz, a professor of medicine at the University of Maryland, is the principal investigator for a trial of a nasal spray aiming to keep a range of respiratory viruses at bay. (University of Maryland School of Medicine)

The university's Center for Vaccine Development and Global Health will test the new spray on 1,100 healthy adults who are at increased risk of a respiratory infections. That's because they are frequently around young children or in close contact with a whole lot of people.

The spray has already shown promise in an initial trial, with minimal side effects, such as a runny nose. If it continues to show it's safe and effective, it could gain approval from the U.S. Food and Drug

That would not be in time for this particularly [bad flu season](#), which has already hospitalized more than 5,000 Marylanders. But the researchers say the spray could ease the burden of millions sickened every year by respiratory infections.

The spray could be most helpful — and would first be targeted — to people vulnerable to complications, such as those with chronic lung and heart disease. It could also aid those at increased risk because of their jobs, such as health care workers.

Dr. Mark T. Gladwin, dean of the School of Medicine, cheered the research focused on using a simple spray to fight off potentially deadly viruses that tax our health care system.

“A preventive approach that strengthens this frontline of defense has the potential to transform how we reduce viral transmission in the community and could help build resilience against future respiratory threats,” he said in a statement.

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