

Trial to test nasal irrigations as COVID-19 treatment

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Kyle Kimura, MD, left, Justin Turner, MD, PhD, and colleagues are studying whether nasal saline irrigations can reduce symptoms in patients with COVID-19. Credit: Erin O. Smith

Researchers from Vanderbilt University Medical Center (VUMC) are conducting a clinical trial to determine whether nasal saline irrigations can reduce viral shedding and symptoms in patients with COVID-19.

Prior studies have shown that using simple, over-the-counter nasal saline irrigations can decrease viral shedding in [upper respiratory infections](#)—including other coronaviruses—helping patients feel better, resolving symptoms in less time and potentially reducing transmissibility of the [virus](#).

"Much of the focus early in the fight against this virus centered around hand hygiene, but as an otolaryngologist, I found that hardly anyone talked about nasal hygiene. Several studies have identified the [nasal cavity](#) and nasopharynx as the primary sites of viral entry, replication and expulsion, which made me think: Why don't we wash our nose like we wash our hands?" said Kyle Kimura, MD, fourth-year resident in the Department of Otolaryngology-Head and Neck Surgery and principal investigator for the study.

"The principle behind good hand hygiene is that rinsing with soap and water can remove viral particles before they can infect yourself or spread to others. I wanted to see if we could apply the same concept in the nose with nasal irrigations to potentially wash away the virus before it can really take hold."

While many medications and treatments have been proposed for COVID-19, there has not yet been a study targeting intervention within the nasal cavity, which is often where a patient first comes into contact with the virus, where the viral load is highest, and where the virus is most likely to exit the body when a person coughs, sneezes or breathes.

"There are other trials that are ongoing and that have been completed for COVID-19 treatments, but most of them are for pharmaceuticals, and in many cases, they're very expensive. This is something that's considered affordable, is available without a prescription, is easy to do and has few side effects," said Justin Turner, MD, Ph.D., associate professor of Otolaryngology-Head and Neck Surgery at VUMC and the study's

director.

"If it has some significant effect on symptoms or disease resolution, or if it has the potential to reduce transmissibility of the virus, then it's something that would be easy to incorporate into the population at large."

The trial is already close to meeting its enrollment goal of more than 100 participants with COVID-19.

Participants are randomized into three groups: a [control group](#) that receives no intervention, a group that receives nasal saline irrigations twice per day, and a group that receives nasal saline irrigations plus half a teaspoon of baby shampoo (which acts as a surfactant, potentially helping to kill the virus) twice per day.

Participants are followed for 14-21 days and self-swab their nose every few days so the researchers can examine their viral load. They also keep a daily symptom diary noting their temperature and symptom severity.

Aside from collecting data on the effectiveness of the nasal treatments, the researchers are examining participants' nasal swabs as part of a separate study funded by the National Institutes of Health (NIH) to learn more about disease progression, the impact of co-infections and the association between nasal viral load and the severity of symptoms.

The researchers will also examine changes the virus causes to the nasal microbiome, when the virus clears and who is more likely to transmit the virus to others by following participants' household contacts to see if they also develop the disease.

"This study epitomizes personalized health—the backbone of Vanderbilt's philosophy of patient care. Indeed, the personalized health

can be expanded to population health—with an effective, safe and inexpensive option—we hope, depending on the test results," said Roland Eavey, MD, Guy M. Maness Professor and chair of Otolaryngology and director of the Vanderbilt Bill Wilkerson Center.

Provided by Vanderbilt University Medical Center

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