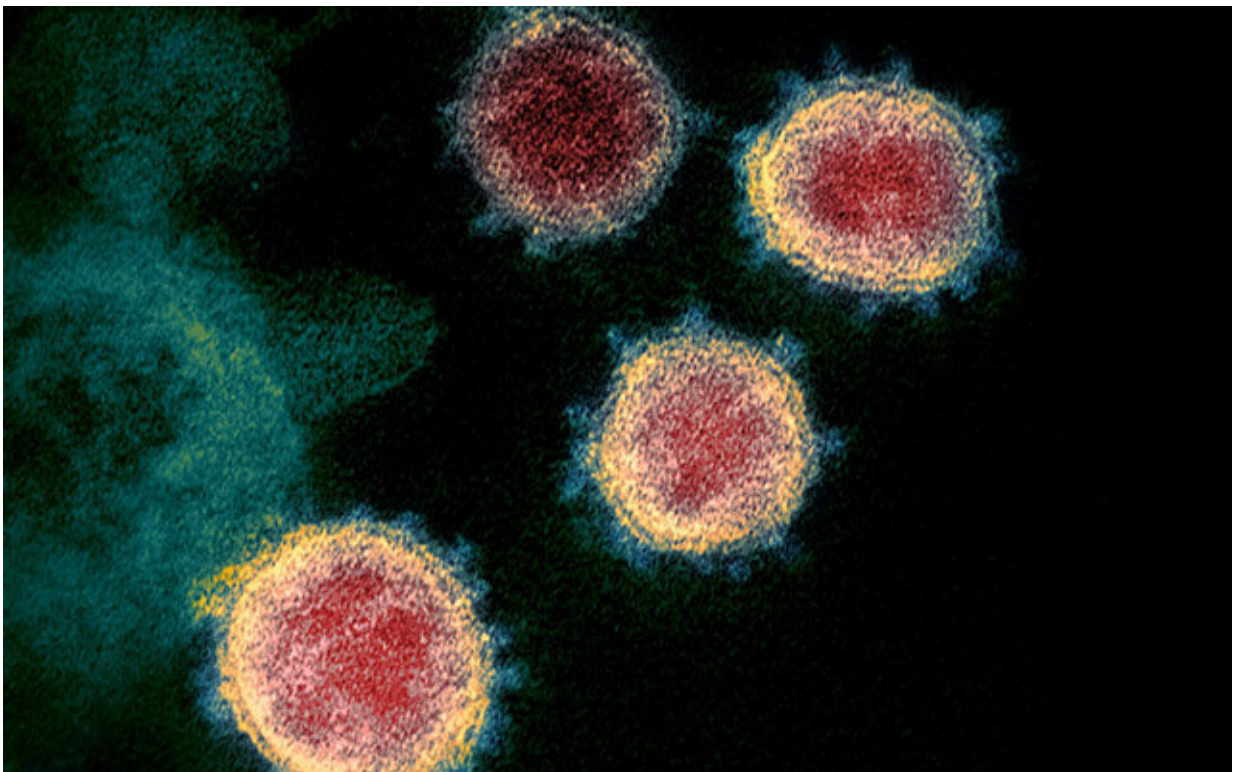


# Researchers suggest oral polio vaccine be tested to see if it might help against SARS-CoV-2

June 12 2020, by Bob Yirka

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A colorized scanning electron micrograph of the SARS-CoV-2 virus. Credit: NIAID

In a Perspective piece published in the journal *Science*, a small international team of researchers is suggesting that the oral polio vaccine

be tested to see if it might protect people from infection by the SARS-CoV-2 virus. In their paper, Konstantin Chumakov, Christine Benn, Peter Aaby, Shyamasundaran Kottili and Robert Gallo suggest the vaccine has been found to provide some protection against other viral infections, and point out that it has been proven to be safe over many years.

Polio vaccines are, of course, vaccines that are used to prevent poliomyelitis infections. They have been in use since the 1950s. Polio vaccines come in two varieties: inactivated (administered by injection) and weakened (administered orally). Together, the two vaccines have nearly eradicated polio. They have also been found to confer some degree of immunity against other types of infections, both bacterial and viral. In their [paper](#), the researchers argue for testing to see if the oral (weakened) [vaccine](#) might prove effective in preventing COVID-19 infections.

They confer some degree of immunity against other infections because they activate an [innate immune response](#), known as the first line of defense response. In contrast, immunity is conferred against certain viruses when a person is infected with it specifically, because the body produces antibodies specifically geared towards fighting it. The authors of the Perspective piece suggest that activating the first line of defense via the oral vaccine may be all some people need to ward off COVID-19 infections. They note also that recent research has shown that the SARS-CoV-2 virus can suppress the innate immune response in patients with more serious symptoms.

The authors suggest the oral vaccine as opposed to the injectable kind be tested because the injectable vaccine does not activate an innate immune response, and because it is already licensed for use in the United States, the country that has thus far been hit hardest by the pandemic. They acknowledge that there is some small risk of using the oral vaccine, as it

has been found to generate circulating vaccine-derived polioviruses, a type of polio that is vaccine derived in a very small number of people, mostly children with compromised or underdeveloped immune systems. But they suggest that if it does prove to ward off coronavirus infections, the good that could come from its use would far outweigh the bad.

**More information:** Konstantin Chumakov et al. Can existing live vaccines prevent COVID-19?, *Science* (2020). [DOI: 10.1126/science.abc4262](https://doi.org/10.1126/science.abc4262)

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