

Preliminary research describes method to disinfect badly needed respirators

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Vaporized hydrogen peroxide can disinfect respirator masks used by health care workers treating patients infected with COVID-19 virus, according to preliminary findings by Yale researchers.

Although researchers did not test for its ability to disinfect COVID-19, a device that circulates vaporized [hydrogen peroxide](#) and commonly used to disinfect [hospital rooms](#) can clear three types of viruses placed on N95-respirators, found the study, now in expedited peer review.

These respirator masks offer state-of-the art protection against infection for health care workers, and are in extremely high demand in pandemic-stricken regions of the country. But after use, they can harbor viral particles, and can potentially infect [health care workers](#).

The device, made by the international firm Bioquell, is in use in some hospitals for sanitizing rooms where patients with highly infectious diseases have been treated.

In theory, thousands of respirator masks could be cleansed of pathogens daily in dedicated areas of a [hospital](#) by using vaporized hydrogen peroxide, the authors say.

The study was conducted at Yale New Haven Hospital by Yale's Patrick Kenney, assistant professor of urology; Richard Martinello, associate professor of medicine ([infectious diseases](#)) and pediatrics; and Benjamin Chan, research scientist in ecology and evolutionary biology. It has been posted on MedRxiv, a site that posts unpublished research from scientists.

The site cautions that research posted there should not be used to inform clinical-care decisions until published in a peer-reviewed journal. Kenney said he hopes that expedited approval for publication will come within the next few days.

More information: Patrick Kenney et al. Hydrogen Peroxide Vapor sterilization of N95 respirators for reuse, (2020). [DOI: 10.1101/2020.03.24.20041087](#)

Provided by Yale University

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