

Low-cost moist heat treatment of N95 masks eliminates SARS-CoV-2, bacteria

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A new study shows that moist heat treatment of N95 masks eliminates severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and bacteria, which would allow reuse of these scarce resources. The study is published in *CMAJ (Canadian Medical Association Journal)*.

The researchers found that moist heat treatment (60 min, 70°C, 50% [relative humidity](#)) did not damage the mask's structure or affect function.

"This low-cost reprocessing strategy can be applied 10 times without affecting the mask's filtration, breathing resistance, fit and comfort, and thus may help to alleviate the global shortage during the COVID-19 pandemic," says Dr. Gregory Borschel, Institute of Biomaterials and Biomedical Engineering and Division of Plastic and Reconstructive Surgery, The Hospital for Sick Children (SickKids), Toronto, Ontario.

Researchers tested 4 common models of N95 masks at various temperatures and humidity levels to determine whether the virus could be detected on the treated masks. They also analyzed fiber samples for [structural integrity](#) and assessed function of the masks after treatment with heat.

"Thermal disinfection of N95 masks may provide a low-cost, effective method for regions with fewer resources to extend their supply of these critical resources, thereby protecting vulnerable front-line workers from job-related risk of infection," says Dr. Borschel.

More information: Simeon C. Daeschler et al. Effect of moist heat reprocessing of N95 respirators on SARS-CoV-2 inactivation and respirator function, *Canadian Medical Association Journal* (2020). [DOI: 10.1503/cmaj.201203](https://doi.org/10.1503/cmaj.201203)

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