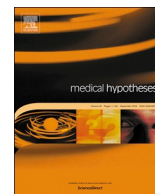




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Letter to Editors

“Therapeutic” facemasks



A B S T R A C T

There must be pathophysiological reason why “cold” viruses like SARS-CoV-2 show proclivity to nasal cavity, oral cavity, pharyngeal cavity and upper airways which have lower temperature than core body temperature. Henceforth, facemasks’ “therapeutic” role against SARS-CoV-2 must be explored because personal “therapeutic” environments may get created under facemasks due to rebreathing of ~95°F “hot” and ~80% “humid” exhalations which may constantly mitigate SARS-CoV-2 inside nasal cavity, oral cavity, pharyngeal cavity and upper airways.

Correspondence

There must be pathophysiological reason why “cold” viruses like SARS-CoV-2 show proclivity to nasal cavity, oral cavity, pharyngeal cavity and upper airways which have lower temperature than core body temperature [1]. Prior to pyrexia becomes a failing mitigation effort against viremia [2], SARS-CoV-2 induced initial pyrexia may be attempting to contain and delay the progression of viremia. However, abnormally high core body temperature may not be able to raise temperature of nasal cavity, oral cavity, pharyngeal cavity and upper airways to such supranormal level that may contain or delay the “cold” viral progression (replication or shedding) at those anatomic sites. Hereafter, facemasks and cloth face coverings which have some preventative role against SARS-CoV2 transmission may demonstrate “therapeutic” role too [3]. When exhalations approximating at pulmonary capillary blood temperature are re-inhaled under facemasks and cloth face coverings, the temperature of nasal cavity, oral cavity, pharyngeal cavity and upper airways may equalize with core body temperature [4]. Thereafter, the “warming” of nasal cavity, oral cavity, pharyngeal cavity and upper airways may create SARS-CoV-2 containment environments under facemasks and cloth face coverings. Moreover, if Department of Homeland Security Science and Technology report can be extrapolated [5], personal “therapeutic” environments may get created under facemasks and cloth face coverings due to rebreathing of ~ 95°F “hot” and ~ 80% “humid” exhalations [6,7], which may constantly mitigate SARS-CoV-2 inside nasal cavity, oral cavity, pharyngeal cavity and upper airways. Interestingly, the physiological reason for intolerance to facemasks and cloth face coverings may be due to active and “warm” brain inefficiently dissipating heat across no-longer-cool nasal cavity and paranasal sinuses [8]. Summarily, “therapeutic” facemasks and cloth face coverings role against SARS-CoV-2 must be explored as simple non-pharmacological mitigation technique during COVID-19 pandemic.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.mehy.2020.109855>.

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