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COVID-19 AND AIR CONDITIONING - IS THERE AN ENVIRONMENTAL LINK?

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Abstract

As it spread globally, the new SARS-CoV-2 virus was first confirmed in Romania in February 2020, and since then over 40000 cases were diagnosed with COVID-19. Considering climate changes that showed a continuously increasing temperature and also the fact that nowadays air conditioning devices are used on daily bases not only in personal homes but also in healthcare facilities we raised the question if cooling air devices could contribute to the spread of SARS CoV-2 virus. For that, we searched data in the speciality literature regarding the potential of transmission of the virus through air conditioning.

Incorrect ventilation in indoor spaces can be associated with an increased transmission rate of respiratory infections as studies suggested. Heating, Ventilation and Air Conditioning Systems (HVAC) are used as one of the infection disease control measure. However, if those are not correctly used, they can contribute to the transmission of an airborne diseases as suggested by data from Japan, Germany, and the Diamond Princess Cruise Ship. There are no clear data that can confirm if there is a link between aerosols produced by HVAC system and transmission of SARS CoV-2 virus and further extensive studies should be performed to either confirm or infirm this hypothesis.

Key words: SARS CoV-2, pandemic, air conditioning, HVAC

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