



Is SARS-CoV-2 transmitted by airborne route?

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KEY FINDINGS

- There is still limited evidence of SARS-CoV-2 airborne transmission.
- SARS-CoV-2 is primarily transmitted person-to-person via respiratory droplets and contact routes.
- Airborne transmission is still uncertain because studies are conflicting.
- According to WHO and CDC, SARS-CoV-2 is mainly transmitted from person to person via respiratory droplets and contact route. The WHO recommends airborne precautions during aerosol-generating procedures.

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RESULTS

Van Doremalen et al. study reported the viability of SARS-CoV-2 in aerosols for at least three hours in controlled laboratory conditions [1].

Cheng et al. study reported no SARS-CoV-2 was detected in all 8 air samples collected during normal breathing, deep breathing, counting 1-2-3 continuously, and coughing continuously with or without a mask on [2].

Ong et al. study reported no SARS-CoV-2 was detected in air samples collected in the isolation room, anteroom and outside the room of three COVID-9 patients [3]. On the other hand, surfaces and personal protective equipment were extensively contaminated with SARS-CoV-2.

CONCLUSION

There is limited evidence on SARS-CoV-2 transmission via airborne route. The experimental study conflicts with the two air sampling studies on the airborne transmissibility of SARS-CoV-2. Clinical and epidemiological studies are needed to make a robust evidence that SARS-CoV-2 is airborne transmissible or not.

REFERENCES

1. van Doremalen N, Morris D, Bushmaker T et al. Aerosol and Surface Stability of SARS-CoV-2 as compared with SARS-CoV-1. *New Engl J Med* 2020 doi: 10.1056/NEJMc2004973.
2. Cheng V, Wong S-C, Chen J, Yip C, Chuang V, Tsang O, et al. Escalating infection control response to the rapidly evolving epidemiology of the Coronavirus disease 2019 (COVID-19) due to SARS-CoV-2 in Hong Kong. *Infect Control Hosp Epidemiol.* 2020 Mar 5 [Epub ahead of print].
3. Ong SW, Tan YK, Chia PY, Lee TH, Ng OT, Wong MS, et al. Air, surface environmental, and personal protective equipment contamination by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) from a symptomatic patient. *JAMA.* 2020.