

Covid-19: droplet vs airborne transmission

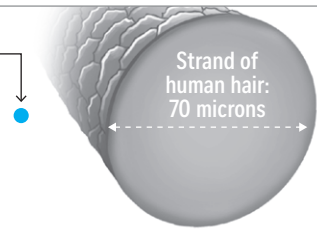
There is debate worldwide over whether the virus is airborne and if this could be a major way it is spread. Timothy Goh explains:

How are respiratory viruses transmitted?

There are two main modes of transmission

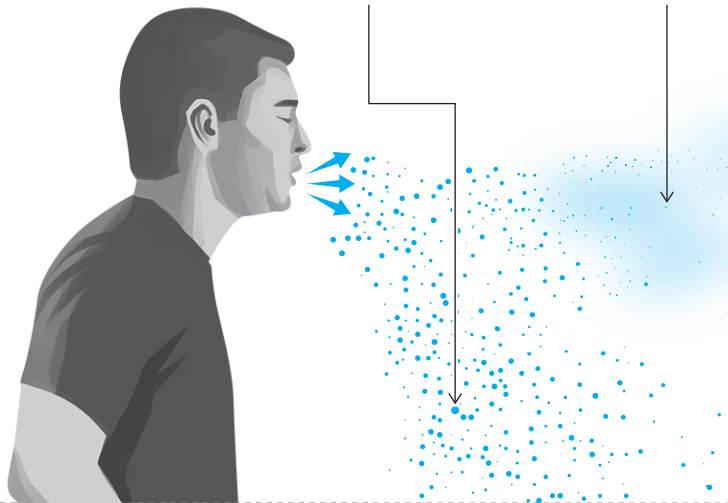
- Via droplets - particles more than 5 to 10 microns in diameter
- Through the air for smaller particles

5-micron
particle



Droplet transmission

- Happens when someone's mouth, nose or eyes come into contact with respiratory droplets from an infected person.
- These droplets are heavy, do not travel far in the air, and fall to the ground quickly.



Airborne transmission

- Here, the virus is present in particles that are so small they can remain suspended in the air for longer, and travel distances greater than 1m.
- Anyone who breathes in the particles becomes infected.

Environmental factors

- The environment plays a part too. If it is windy or dry, the same virus is more likely to be transmitted as an aerosol.
- For example, the flu virus is traditionally passed on via droplet transmission, though windy conditions can make it aerosolised.

Examples of airborne illnesses

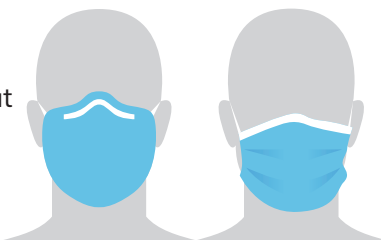
- Measles
- Chickenpox
- Tuberculosis

Examples of illnesses spread through droplets

- Sars
- Influenza
- Pneumonia

Precautionary measures against airborne viruses

- Masks with smaller filters, such as N95 masks, are needed for maximum protection, but surgical and disposable masks also help to reduce droplet spray.



- Special filters will also need to be installed in ventilation systems.

