

Airborne Transmission: An Editorial

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Editorial

The spread of an infectious disease through microscopic particles dispersed in the air is known as airborne or aerosol transmission. Infectious diseases that can be transmitted through the air include a wide range of diseases that are important in both human and veterinary medicine. Viruses, bacteria, and fungus are examples of infectious agents that can be disseminated through breathing, talking, coughing, sneezing, raising dust, spraying liquids, flushing toilets, or any other activity that produces aerosol particles or droplets. This refers to disease transmission by the spread of an infectious agent and excludes diseases induced by air pollution. Airborne transmission has long been thought to be separate from droplet transmission, although this is erroneous. After ejection, respiratory droplets were assumed to fall quickly to the ground [1-4].

Airborne illnesses can be transferred through coughs and sneezes, liquid sprays, and dust. Microorganisms can be found in soil, garbage, and other areas, as well as in sick people and animals. Airborne infections come in a variety of forms, each with its own set of symptoms, treatments, and prognoses. Two methods for preventing transmission are wearing personal protective equipment and using suitable ventilation systems. Depending on the sickness, individuals can help prevent illness transmission by avoiding direct contact with others or wearing a facial covering. According to the Centers for Disease Control and Prevention (CDC) Trusted Source, airborne illnesses can spread via direct or indirect transmission depending on the germ involved. Germs can enter the air in the form of wet droplets when someone breathes or sneezes [3].

Aerosols and droplets come in a variety of sizes and concentrations, and the amount produced varies greatly depending on the person and activity. Droplets larger than 100 µm in diameter usually settle within 2 m, airborne diseases can be carried for longer periods of time by smaller particles. While airborne infections have a higher concentration within 2 metres, they can move further and concentrate in a room. Some particles, such as the fungus *Aspergillus*, are found in large quantities in the environment Trusted Source. It can be found in soil, plants, and food and water, as well as decomposing plant waste, home dust, and building materials. Breathing in dust containing the fungus during construction may cause sickness in certain persons [4].

Exhaled particles constitute a continuum of sizes whose fates are

dependent on environmental factors in addition to their original sizes; therefore the traditional size cut off of 5 µm between airborne and respiratory droplets has been abandoned [5]. For decades, this inaccuracy has informed hospital-based transmission-based measures. According to data from indoor respiratory secretion transfer, droplets/aerosols in the 20 µm size range travel with the air flow from cough jets and air conditioning like aerosols, but then fall out gravitationally at a greater distance as "jet riders." Because aerosols/droplets in this size range are most efficiently filtered out in the nasal mucosa, the primary infection site in COVID-19, they may play a role in fueling the COVID-19 pandemic.

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Conflict of Interest

The author has no conflict of interest towards the article.

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