Determining the Respiratory Activities Responsible for Disease Transmission

Figure 1. Procedure for measuring jets using ImageJ.

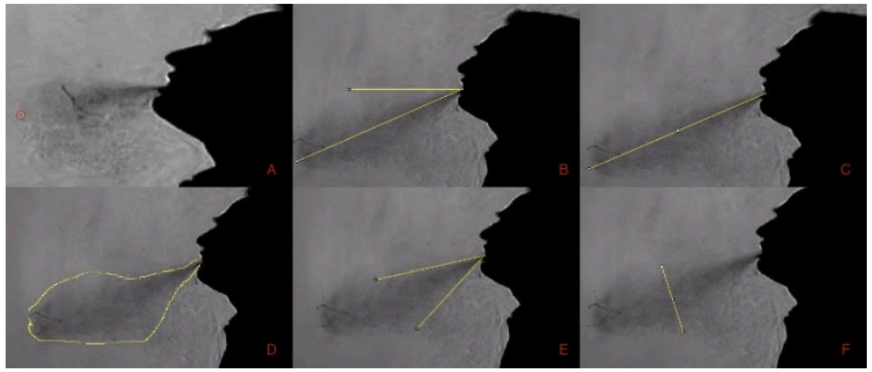
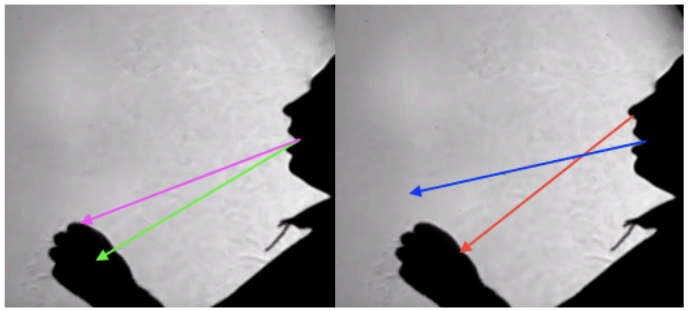


Figure 2. Angles of Exhalation



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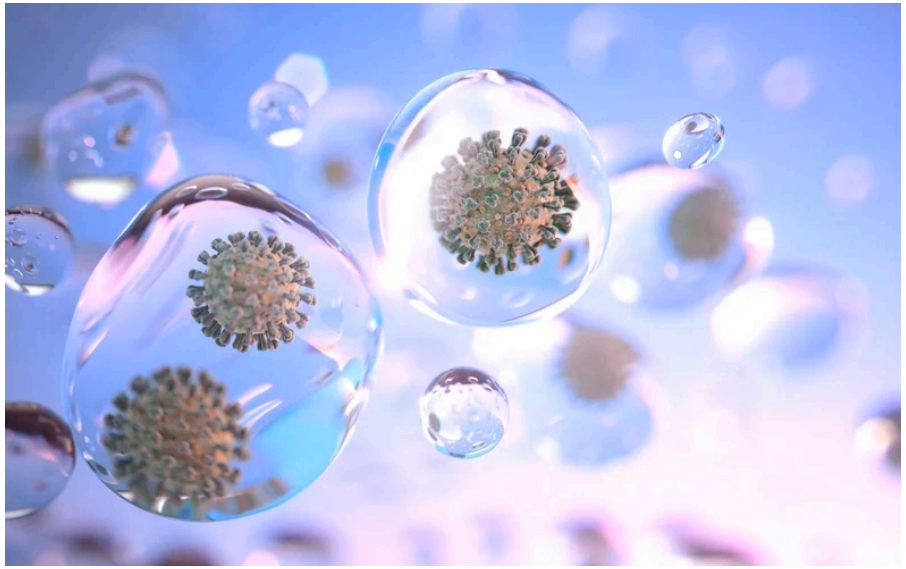
Which respiratory activities are responsible for the transmission of diseases?

- According to the CDC, the primary mode of transmission of COVID-19 occurs when respiratory droplets from an infected individual move through the air to a nearby individual's mouth and/or nose. This makes it essential to look into which respiratory activities play roles in this transmission.



Results

- Coughing, sneezing and breathing all contribute to the spread of respiratory droplets. Coughs and sneezes travel faster and farther, and cover a larger area than breathing; however, breathing happens so frequently that it can not be counted out when considering respiratory activities that lead to disease transmission.
- It has been known that coughing and sneezing are very capable of disease transmission, and is likely that breathing in close proximity to another individual can also frequently transmit diseases. Researchers are encouraged to look deeper into the fluid dynamics of nose and mouth exhalation, as research on these activities is lacking.
- This research reinforced the importance of social distancing and wearing a mask.