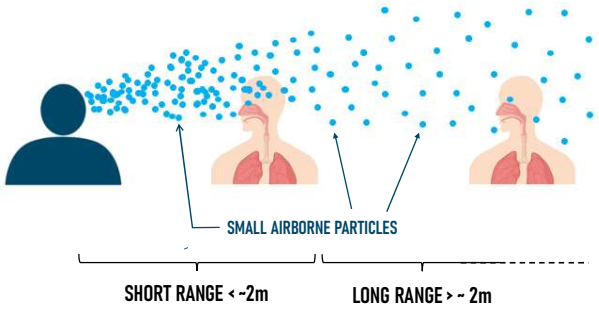
FLU, COVID-19, MEASLES, TUBERCULOSIS...
HOW ARE THESE DISEASES TRANSMITTED?
THE ROLE OF INFECTIOUS RESPIRATORY PARTICLES

BY BREATHING SMALL AIRBORNE PARTICLES

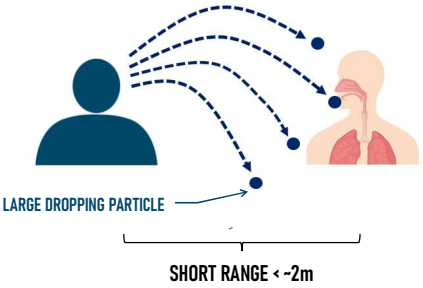
INHALATION OF PARTICLES
VIA THE UPPER RESPIRATORY TRACT



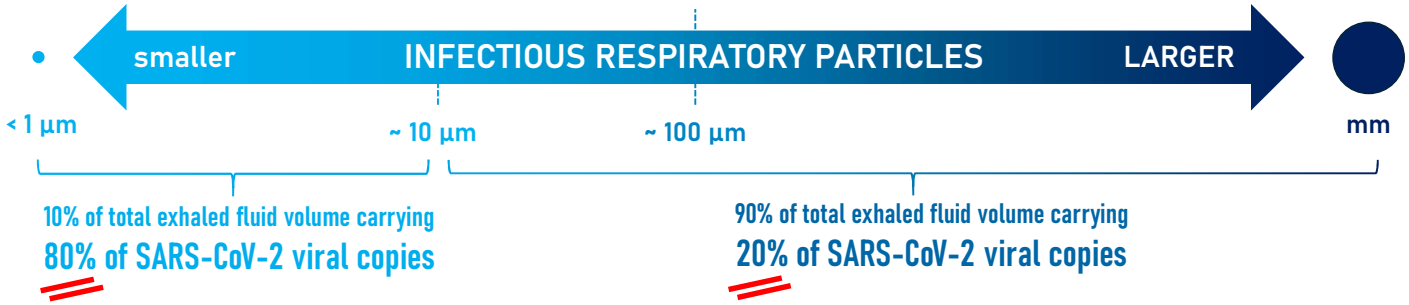
- transmission by airborne particles (also known as “aerosols”)
- suspended in the air, sometimes for hours
- trajectories are influenced by airflow
- can cover long distances

BY RECEIVING LARGE DROPPING PARTICLES

DEPOSITION OF PARTICLES ON THE MUCOUS MEMBRANES
OF THE MOUTH, NOSE, EYES



- transmission by semi-ballistic particles (also known as “droplets”)
- trajectories are governed by gravity.
- falls quickly after travelling a few meters.
- does not travel long distances



Infectious Respiratory Particles exist on a continuous spectrum of sizes (from sub-microns to millimeters in diameter) and their behavior and trajectories in the air depend on several parameters : ambient air temperature, velocity, humidity, sunlight (ultraviolet radiation), airflow distribution within a space...

The representation above is simplified and shows the two main models of particle physical behavior, characteristic of what happens at the extremums. The transition from one to the other is continuous with hydride behavior. The limits of ~10µm and ~100µm are orders of magnitude, as are the % values indicated.

This is a draft / Work in progress. Version 0.48 - 2025-03-28
Contact : info@letsair.org