

# DID YOU KNOW...?



## Infection = Exposure x Time

In order to become infected, you would need to be exposed to an infectious dose of the virus. Based on infectious dose studies with other coronaviruses, it appears only small doses may be needed for an infection to take hold. Some experts estimate as few as 1000 SARS-CoV2 infectious viral particles are all that is needed to become infected.

This viral threshold can be reached by an infected person's sneeze or cough, which releases a large number of viral particles into the air. But an infected person talking or even just breathing still releases some virus into the air, and over a long period of time in an enclosed space, which could still infect others.

The longer time you spend in that environment – minutes or hours – the more virus you breathe in, the more it can build up and establish an infection.

The exposure x time formula is the basis for contact tracing. Anyone you spend greater than 10 minutes with in a face-to-face situation is potentially infected. Alternatively, anyone who shares a space with you for an extended period is potentially infected.

### Control Measures:

- **Physical distancing** of 2m/6ft allows time for the virus to fall to the ground and reduces the chances of an individual inhaling the viral particles.
- **Wearing a mask** helps stop the spread of the germs from an infected or potentially infected person into the environment.
- **Diligent cleaning/sanitization practices** ensure that viral particles that have fallen onto surfaces are being removed.
- **Diligent hand hygiene practices** helps ensure that viral particles are removed from the skin and cross contamination is avoided.



<https://www.ctvnews.ca/health/coronavirus/prolonged-time-exposed-to-virus-a-factor-in-infection-1.4944021>

<https://www.erinbromage.com/post/the-risks-know-them-avoid-them>

