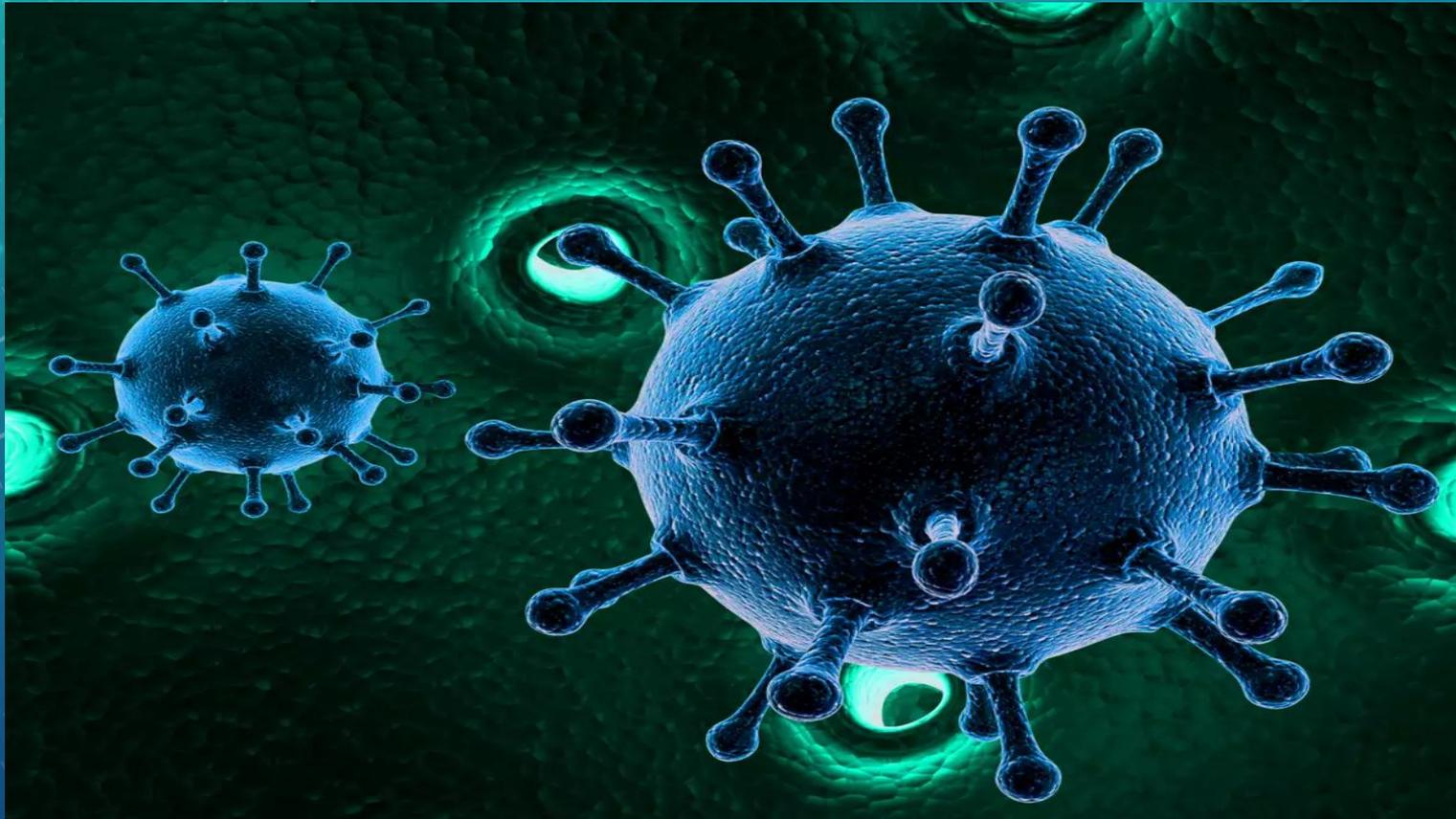




**CHRIST**  
(DEEMED TO BE UNIVERSITY)  
BANGALORE · INDIA

# Understanding the Pandemic - an Overview



**DR. ASHA PINTO**

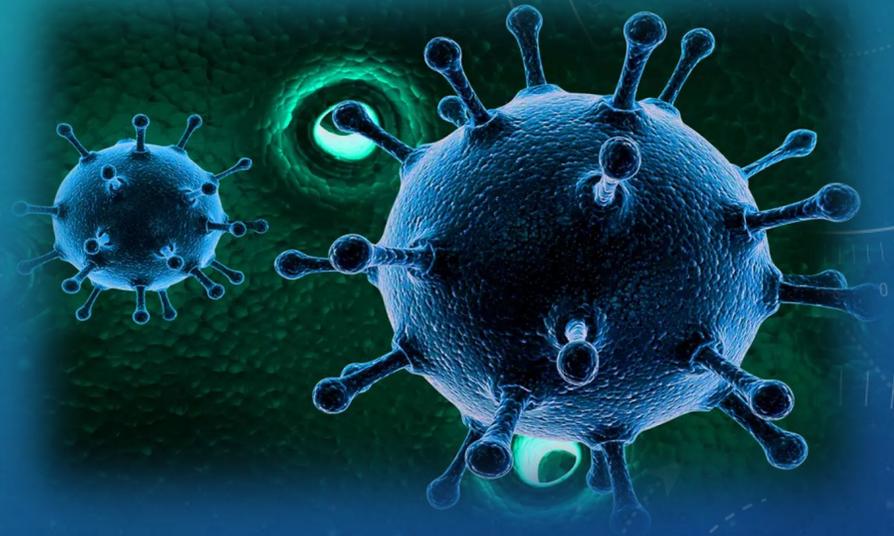
MEDICAL OFFICER

CHRIST (DEEMED TO BE UNIVERSITY)

22 June 2020

# CORONAVIRUS

- Coronavirus may cause illness in animals or humans
- common respiratory infections- common cold
- More severe diseases:
  - Severe Acute Respiratory Syndrome (SARS)
  - Middle East Respiratory Syndrome (MERS)
  - COVID-19 caused by the SARS-CoV-2 virus



# WHAT IS A PANDEMIC?

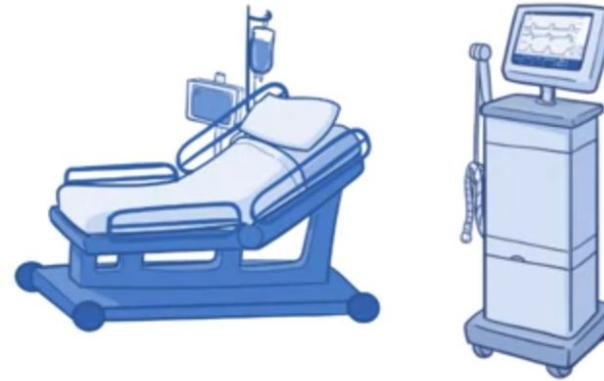
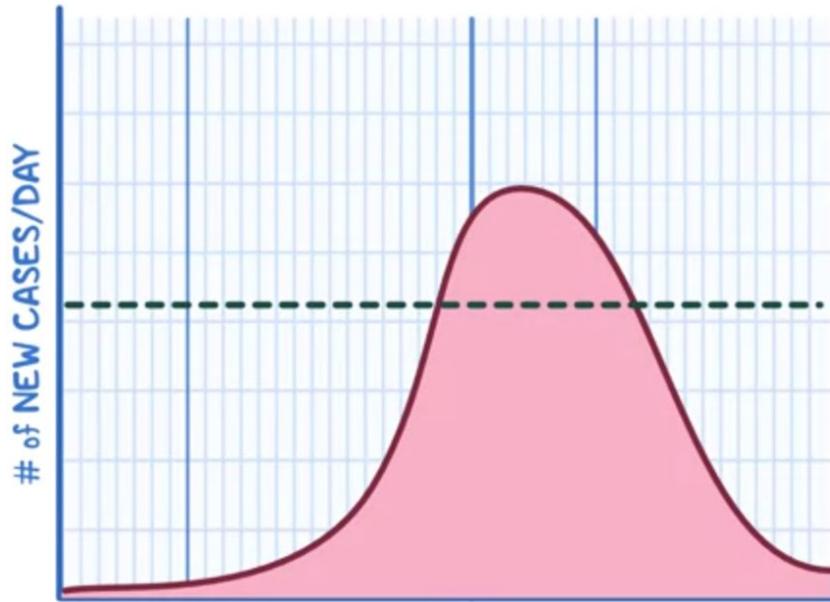
Epidemic

Vs.

Pandemic



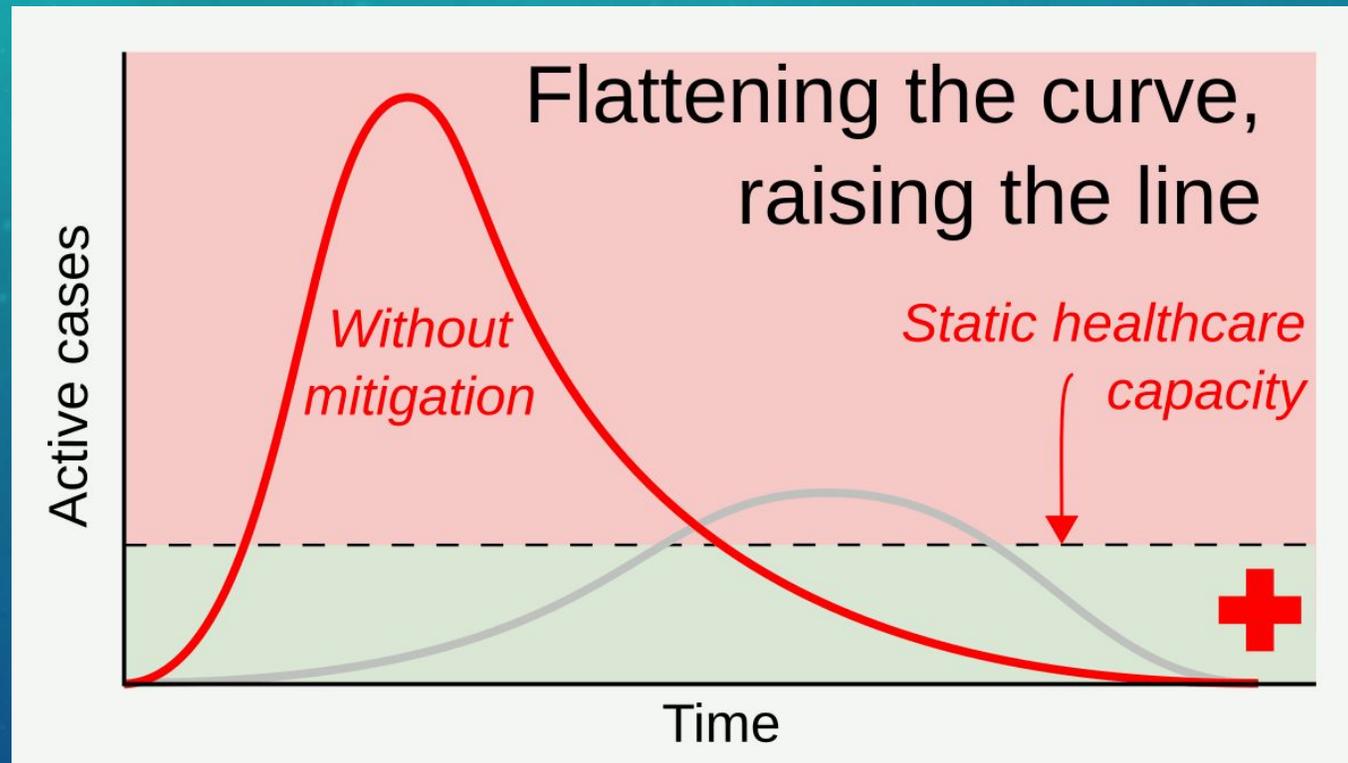
# THE EPIDEMIC CURVE



**CAPACITY of HEALTHCARE SYSTEM**  
↳ USUALLY working near FULL CAPACITY



# FLATTEN THE CURVE, RAISE THE LINE



# MORTALITY

AGE, years	CASE FATALITY RATE, %
0-9	---
10-19	0.2
20-29	0.2
30-39	0.2
40-49	0.4
50-59	1.3
60-69	3.6
70-79	8.0
> 80	14.8

COMORBID CONDITION	CASE FATALITY RATE, %
HYPERTENSION	6.0
DIABETES	7.3
CARDIOVASCULAR DISEASE	10.5
CHRONIC RESPIRATORY DISEASE	6.3
CANCER (any)	5.6

# INDIA



**155227**

Active Cases



**186934**

Cured/ Discharged



**11903**

Deaths



**1**

Migrated

Covid-19 India Dashboard

# KARNATAKA



**7530**

Confirmed



**2976**

Active



**4456**

Recovered



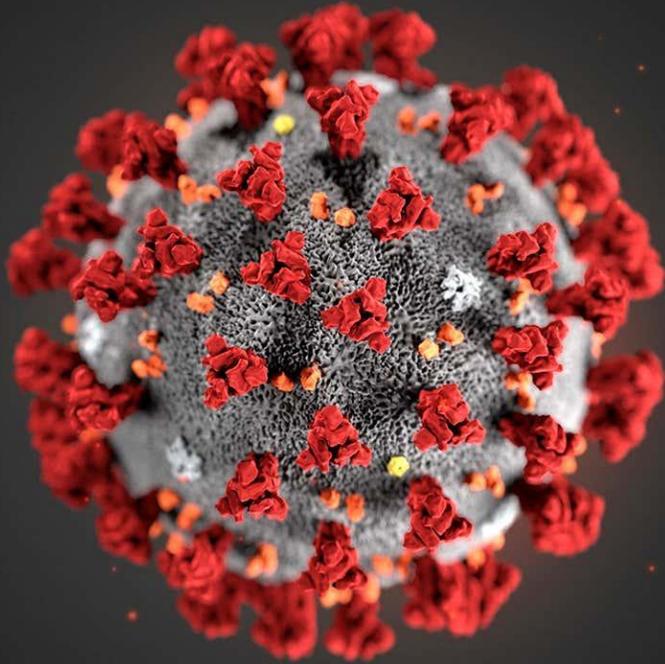
**94**

Deceased

Covid-19 Karnataka Dashboard

Covid-19 BBMP Dashboard

# CORONAVIRUS STRUCTURE



Nucleocapsid protein (N)  
and RNA

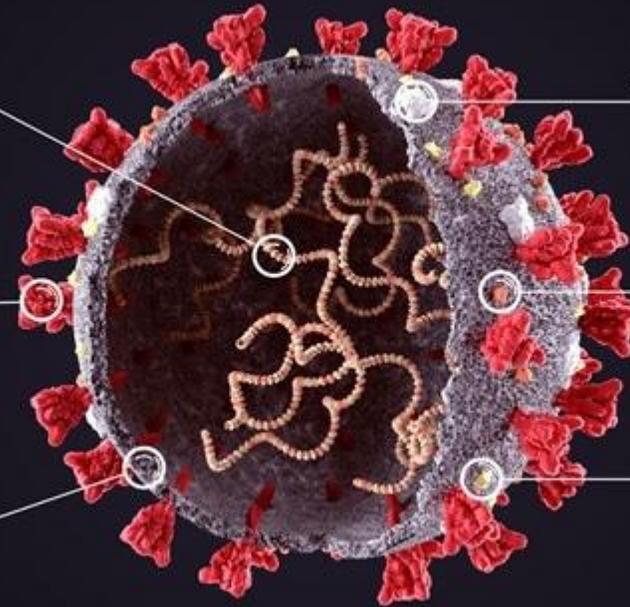
Spike glycoprotein (S)

Lipid bilayer  
membrane

Hemagglutinin esterase (He)

Membrane protein (M)

Envelope protein (E)



# HOW LONG CAN THE CORONAVIRUS LIVE ON SURFACES?

SURFACE	LIFESPAN OF COVID-19 VIRUS	SURFACE	LIFESPAN OF COVID-19 VIRUS
 Paper and tissue paper**	3 hours 	 Stainless steel*	2–3 days 
 Copper*	4 hours 	 Polypropylene plastic*	3 days 
 Cardboard*	24 hours 	 Glass**	4 days 
 Wood**	2 days 	 Paper money**	4 days 
 Cloth**	2 days 	 Outside of surgical mask**	7 days 

\*At 69.8 to 73.4°F (21 to 23 °C) and 40% relative humidity

\*\*At 71°F and 65% relative humidity

Source: New England Journal of Medicine\*; The Lancet Microbe\*\*

BUSINESS INSIDER

# DISINFECTING HIGH-TOUCH SURFACES



Fire & Water - Cleanup & Restoration™  
SERVPRO® of Bear/New Castle



KEYBOARDS



PHONES + TABLETS



TABLES + COUNTERS



DOOR KNOBS



LIGHT SWITCHES



TOILETS

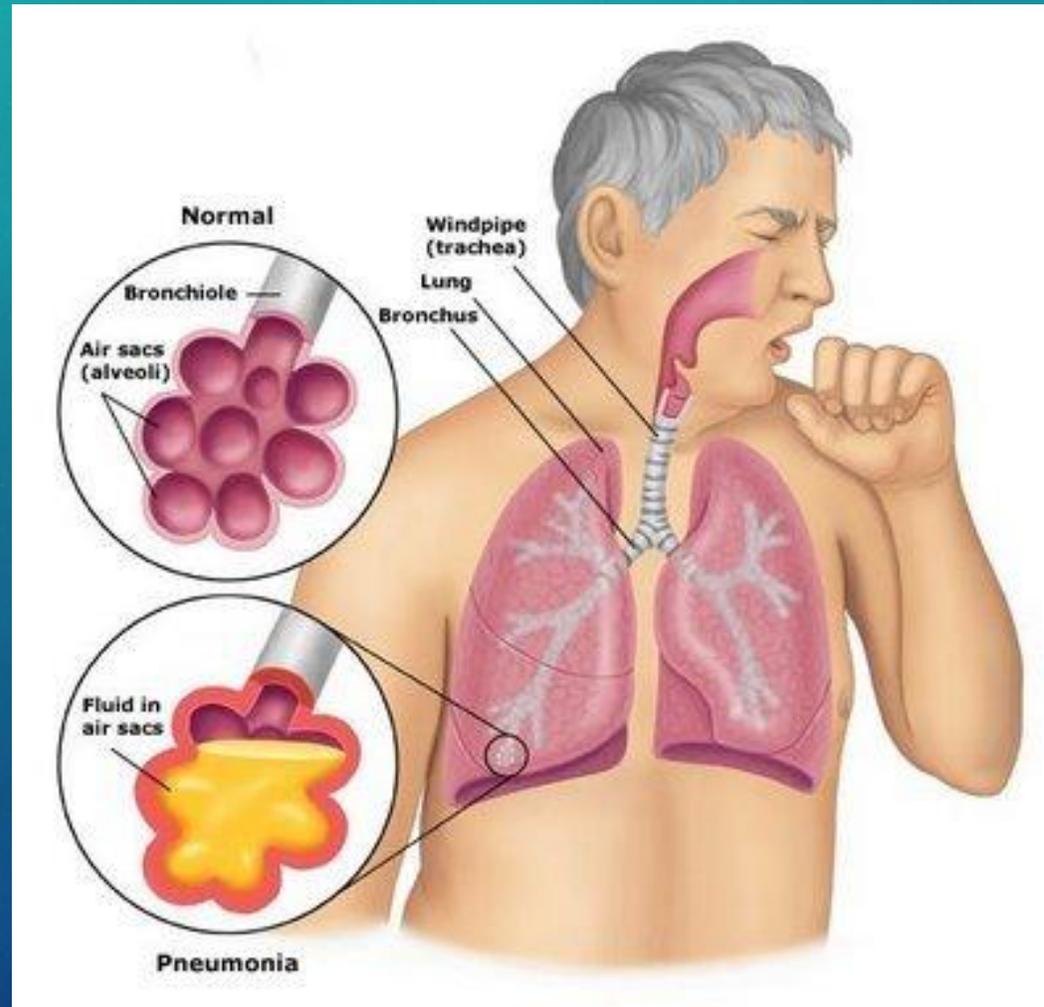


BATHROOM FIXTURES

# SYMPTOMS OF COVID-19

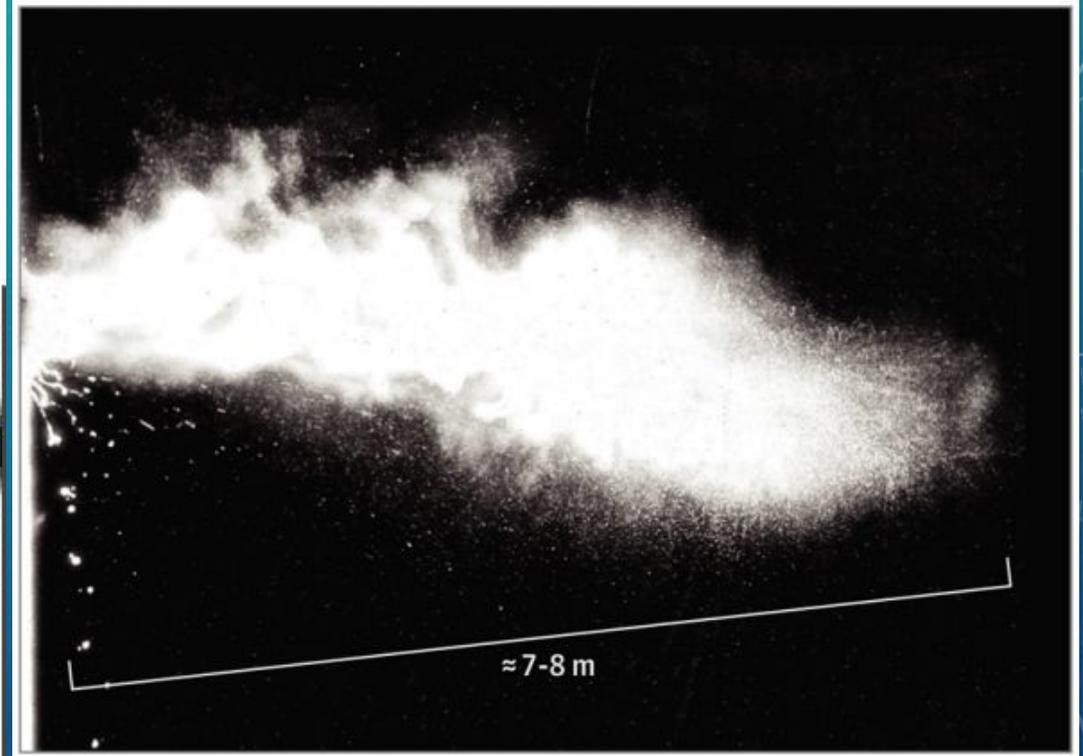
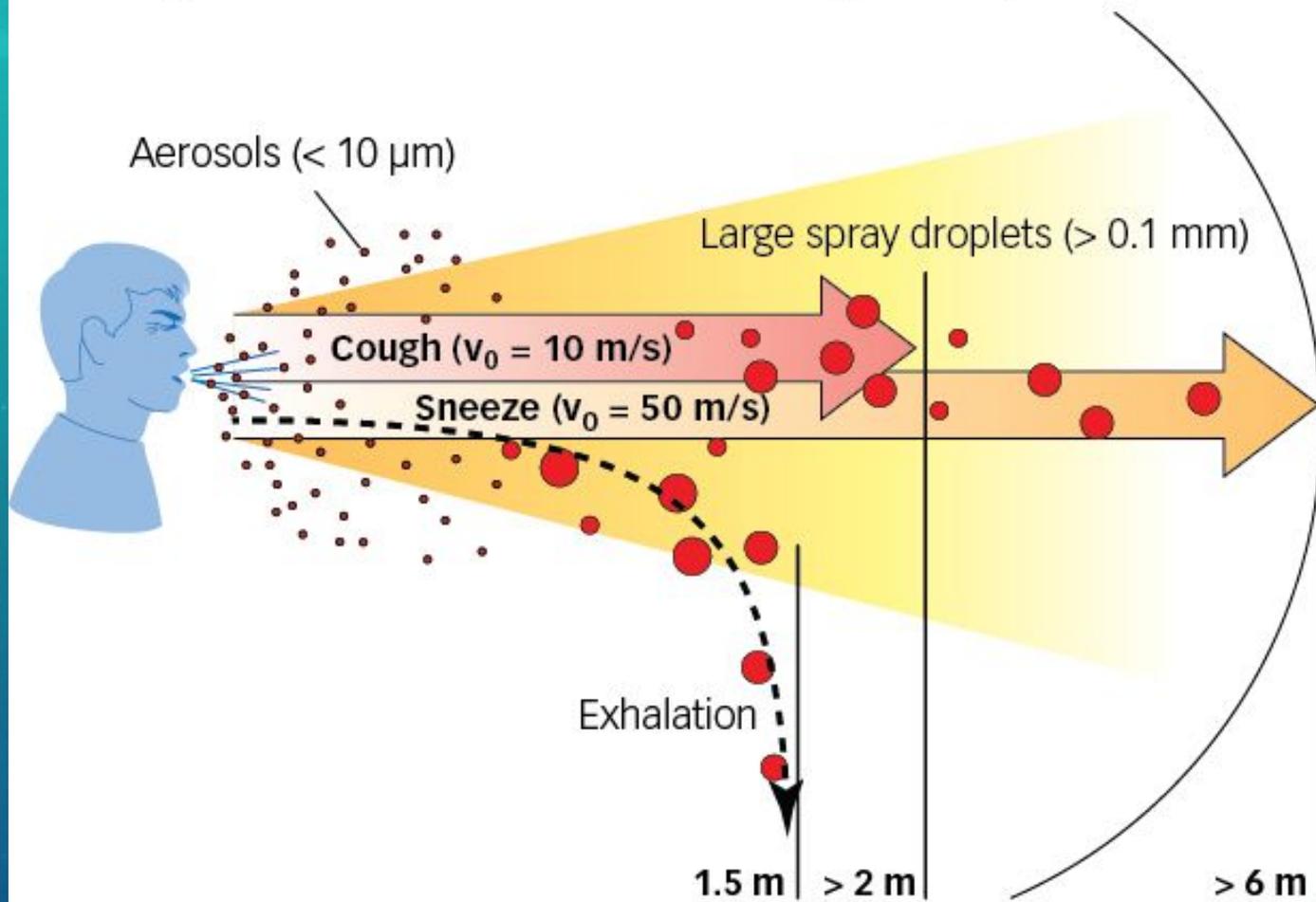


# SOME CASES DEVELOP SERIOUS ILLNESS



# SPREAD OF COVID-19

**Figure 3:** How COVID-19 is transmitted through aerosol particles



# PREVENTION OF COVID-19

Make 'SMS' your habit!



**SOAP**  
Wash your  
hands frequently



**MASK**  
Wear a mask  
when go outside



**SOCIAL  
DISTANCE**  
Keep distance

# FREQUENT HAND-WASHING: 20 SECONDS AT LEAST



# HAND-WASHING STEPS



**Palm to palm**



**Between fingers**



**Back of hands**



**Base of thumbs**



**Back of fingers**



**Fingernails**



**Wrists**



**Rinse and wipe dry**

# COUGH ETIQUETTE



Cover your mouth and nose with a tissue when you cough or sneeze.

1



Cough or sneeze into your sleeve or elbow, not your hands.

OR



Place your used tissues in the rubbish bin.

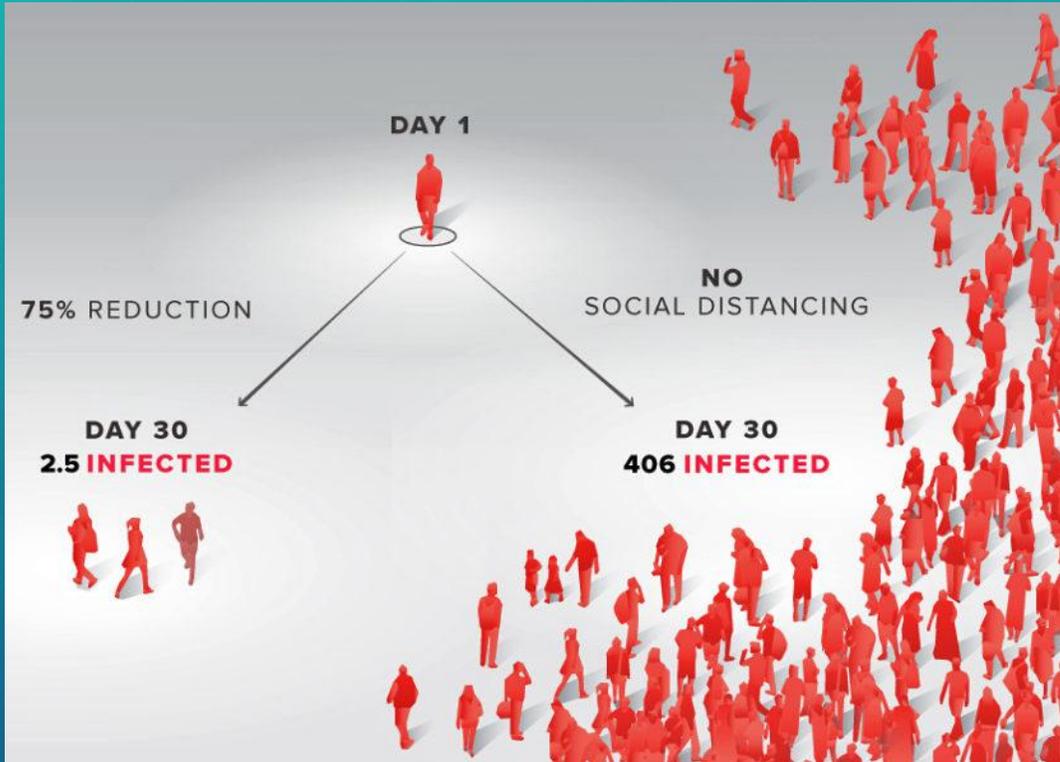
2



Wash your hands with soap and water, or sanitise with alcohol based hand gel.

3

# SOCIAL DISTANCING –HOW IT HELPS



Scenario	5 Day Period	30 Day Period
No social distancing practiced	1 person infects 2.5* others	406 people infected as a result
50% reduction in social exposure	1 person infects 1.25* others	15 people infected as a result
75% reduction in social exposure	1 person infects 0.625* others	2.5 people infected as a result

*\*For estimations only. It is not possible to infect only a fraction of another person.*

# SOCIAL DISTANCING

## WHAT IS IT?



Keep at least  
**6ft (2m)** apart  
from others



Avoid non-essential  
gatherings and  
crowds



Limit contact  
with those at  
higher risk

# SOCIAL DISTANCING

## WHAT CAN YOU DO?



Work from  
home whenever  
possible



Greet with a wave,  
not handshakes  
or hugs



Avoid going out,  
except for  
essentials

Source: Government of Canada

**WEAR YOUR MASK TO KEEP  
YOURSELF AND OTHERS SAFE**



# HOW TO WEAR A NON-MEDICAL FABRIC MASK SAFELY

[who.int/epi-win](https://www.who.int/epi-win)

## Do's →



Clean your hands before touching the mask



Inspect the mask for damage or if dirty



Adjust the mask to your face without leaving gaps on the sides



Cover your mouth, nose, and chin



Avoid touching the mask



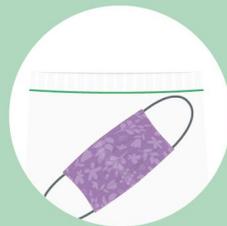
Clean your hands before removing the mask



Remove the mask by the straps behind the ears or head



Pull the mask away from your face



Store the mask in a clean plastic, resealable bag if it is not dirty or wet and you plan to re-use it



Remove the mask by the straps when taking it out of the bag



Wash the mask in soap or detergent, preferably with hot water, at least once a day



Clean your hands after removing the mask

# WEARING YOUR MASK

## Don'ts →



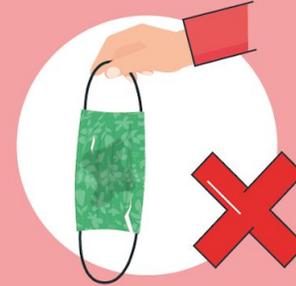
Do not wear the mask under the nose



Do not remove the mask where there are people within 1 metre



Do not use a mask that is difficult to breathe through



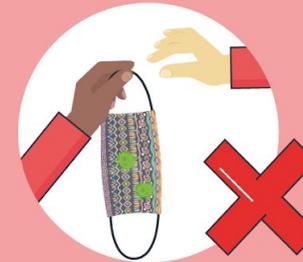
Do not use a mask that looks damaged



Do not wear a loose mask



Do not wear a dirty or wet mask



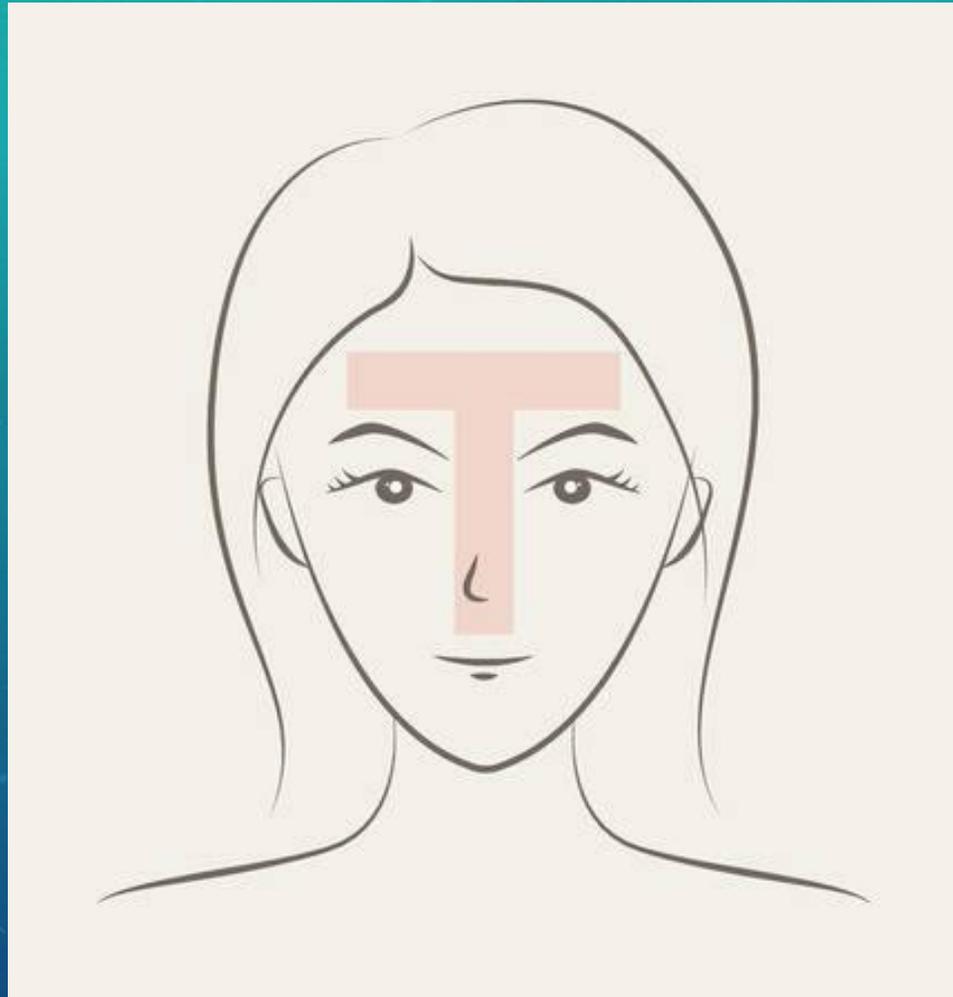
Do not share your mask with others

**A fabric mask can protect others around you. To protect yourself and prevent the spread of COVID-19, remember to keep at least 1 metre distance from others, clean your hands frequently and thoroughly, and avoid touching your face and mask.**



**World Health Organization**

# PROTECT THE T-ZONE



# BOOST YOUR IMMUNITY: EAT WELL



# BOOST YOUR IMMUNITY WITH EXERCISE



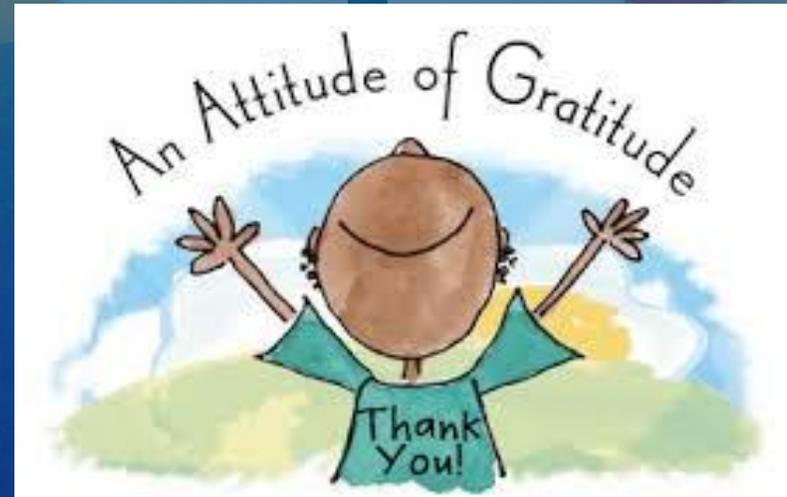
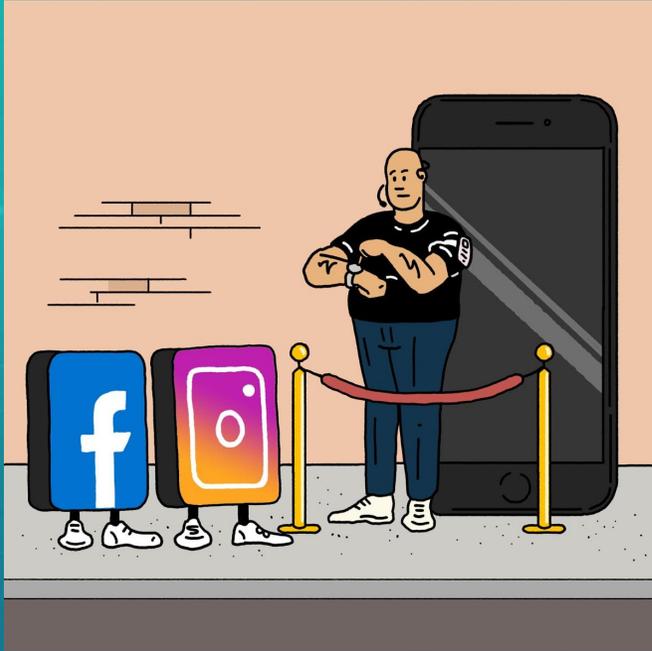
# BOOST YOUR IMMUNITY: SLEEP WELL



# AVOID SMOKING AND ALCOHOL



# STAY POSITIVE



# CREDITS

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<https://www.bbc.com>

<https://www.cdc.gov/coronavirus/2019-nCoV/index.html>

<https://www.visualcapitalist.com/the-math-behind-social-distancing/>

<https://www.eenewseurope.com/news/high-speed-imaging-video-shows-how-far-covid-19-sneeze-reaches/page/0/1>

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

<https://www.coursera.org/learn/covid-19-what-you-need-to-know>



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