



# TRENDS IN MICROBIOLOGY

Sep-Dec 2021



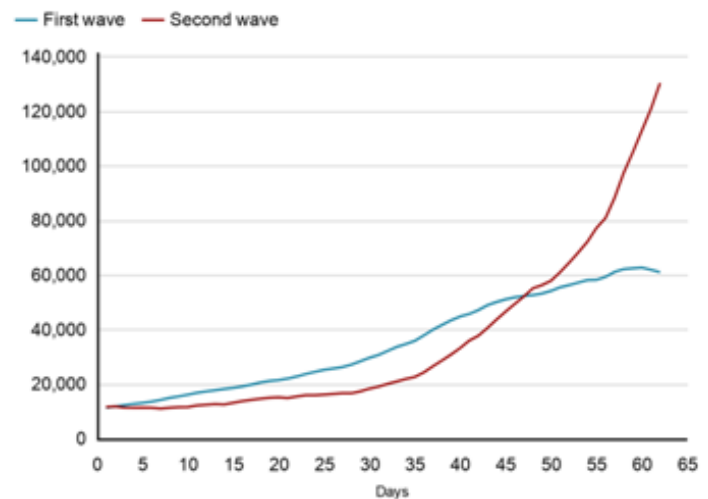
## COVID-19

CO-CORONA  
D-DISEASE

VI-VIRUS  
19- 2019

## COVID-19 PANDEMIC: THE SECOND/THIRD WAVE

COVID: FIRST WAVE v/s SECOND WAVE



First wave: June-Sep 2020, second wave: Feb-April 2021

**Coronaviruses** are a large family of viruses which may cause illness in animals and humans. In humans, several Coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). COVID-19 is an infectious disease caused by the most recently discovered Coronavirus.



### How does COVID-19 spread?

People can catch COVID-19 from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales. These droplets land on objects and surfaces around the person. Other people then catch COVID-19 by touching these objects or surfaces, then touching their eyes, nose or mouth. People can also catch COVID-19 if they breathe in droplets from a person with COVID-19 who coughs out or exhales.

## Featured articles

### Global Pandemic

Coronavirus (COVID-19) global pandemic currently predominates planet earth and has ground life as we know it to a complete stand still. Some luckily escape with mild flu-like symptoms while others succumb to the devastating effects of severe acute respiratory distress syndrome in spite of ventilator support in intensive care units (ICU).

## EDITORIAL

Rev. Dr. J.G.Vazhan Arasu, Principal  
Patron

Dr. Sonali Nigam, Head  
Chief Editor

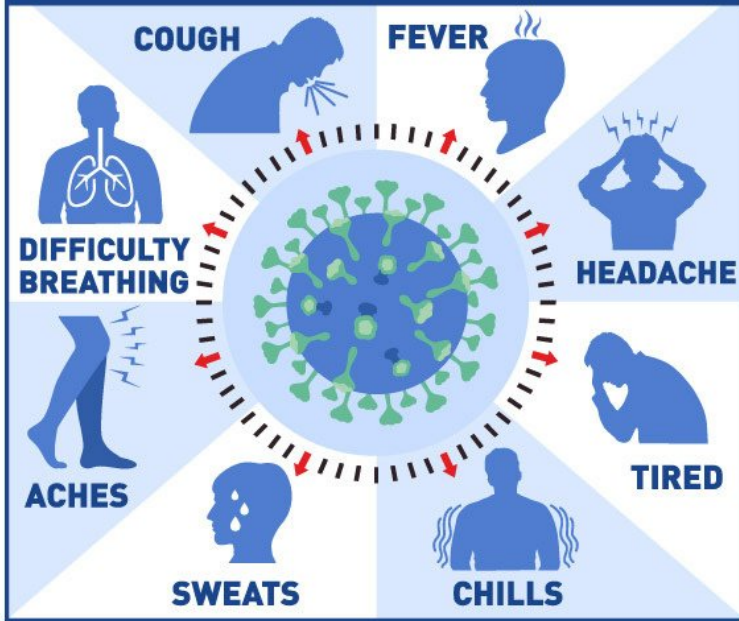
Mrs. Roshni Choubey, Asst. Professor  
Editor

Ms. Anamma Alex, M.Sc II sem Microbiology  
Student Editor

"The secret of crisis management is not Good vs Bad. It is preventing the bad getting worse".

Ken Matos

## SYMPTOMS OF CORONAVIRUS COVID-19



## MEDICAL EMERGENCY

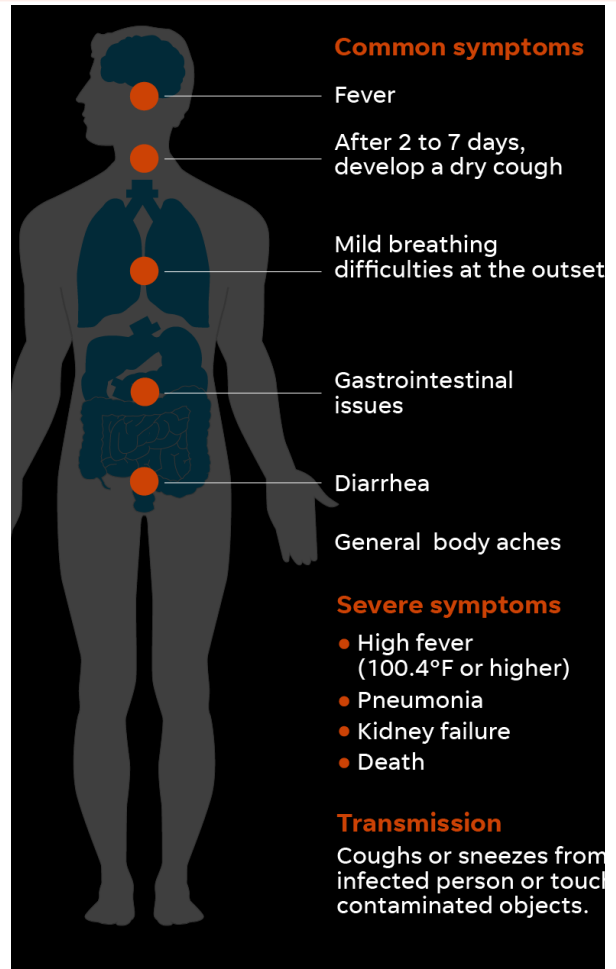
Seek medical care immediately if someone has Emergency Warning Signs of COVID-19

Trouble breathing  
Persistent pain or pressure in the chest  
New confusion  
Inability to wake or stay awake  
Bluish lips or face

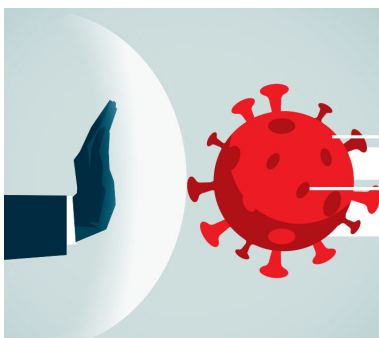
This list is *not all* possible symptoms. Please call your healthcare provider for any other symptoms that are severe or concerning to you.

## STOP THE SPREAD OF CORONAVIRUS

1. Wash your hands for at least 20 seconds often with soap and water.
2. Clean and disinfect commonly used surfaces.
3. Avoid close contact.
4. Don't touch your eyes, nose or mouth
5. 1. Cover your nose and mouth with a mask.



## FIGHT AGAINST CORONA



### CATCH IT

Germs spread easily. Always carry tissues and use them to catch your cough or sneeze.

### BIN IT

Germs can live for several hours on tissues. Dispose of your tissue as soon as possible.

### KILL IT

Hands can transfer germs to every surface you touch. Clean your hands as soon as you can.



# CORONA VACCINE

*fight against Corona Virus*

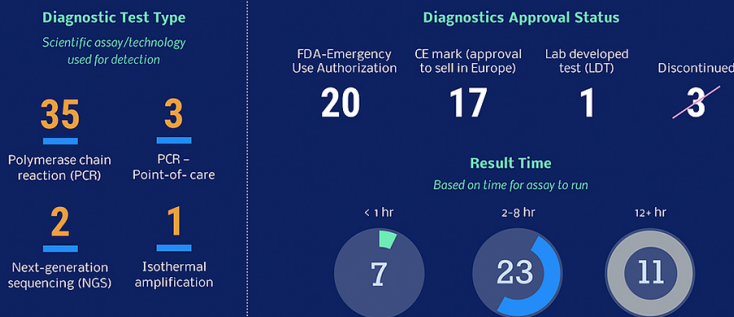
## COVID-19 VACCINES



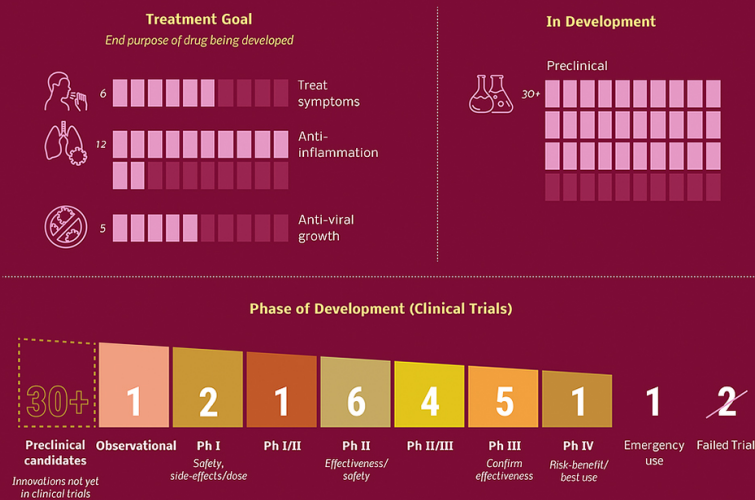
There are four types of vaccines in clinical trials: whole virus, protein subunit, viral vector and nucleic acid (RNA and DNA), each of which protects people, but by producing immunity in a slightly different way.



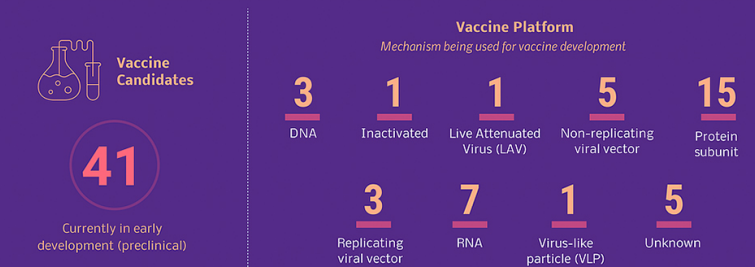
### DIAGNOSTICS



### TREATMENTS



### VACCINES



## MYTHS ABOUT THE COVID-19 VACCINE

- MYTH:** COVID-19 vaccine alters DNA.  
**FACT:** mRNA doesn't enter a cell's nucleus and cannot change DNA.
- MYTH:** It isn't safe because of quick rollout.  
**FACT:** Thorough safety standards and trials were met.
- MYTH:** Food allergy, immunocompromised, breast feeding or pregnant, people can't get the vaccine.  
**FACT:** All people can get vaccine.
- MYTH:** I'll get COVID-19 from vaccine.  
**FACT:** The vaccine cannot give you the virus. It protects you.
- MYTH:** I've had COVID-19 so I don't need the vaccine.  
**FACT:** Natural immunity length is unknown. Vaccine fights re infection.
- MYTH:** No need for mask or social distancing after vaccine.  
**FACT:** You must still take precautions to help end the pandemic.

**TRENDS IN MICROBIOLOGY**

**THE THIRD WAVE** QUATERLY NEWSLETTER



We're back in familiar territory - growing concern about a new variant of coronavirus.

It has been named Omicron by the World Health Organization, following the pattern of Greek code-names like the Alpha and Delta variants.

Omicron has such a long list of mutations that it was described by one scientist as "horrific", while another told me it was the worst variant they'd seen.

It has now been detected in more than 30 countries and there are signs it may be able to bypass some of our immunity.

But there are also claims that it could be milder than earlier versions of Covid, such as Delta.

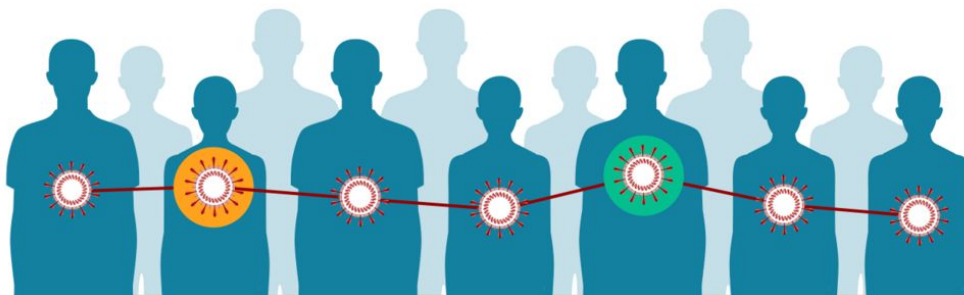
**Coronavirus variants: What are they and how do they happen?**

What we know and don't know about Omicron variant

**1 High numbers of cases increase risk of mutations**

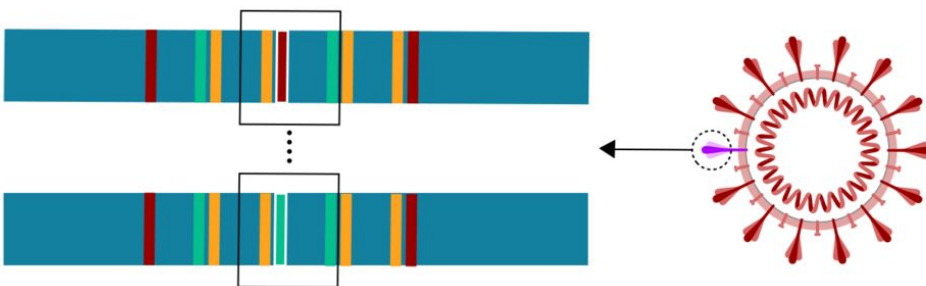
The more a virus spreads, the more chance it has to mutate. Thousands of small changes have been seen in coronavirus so far - most with little impact.

- omicron is more transmissible more easily spread between people compared to other variants like the highly transmissible delta variant.
- there may be an increased risk of reinfection with omicron



**2 Some mutations lead to new variants**

Every so often, a virus changes in a way that helps it survive. Scientists are particularly concerned about changes to the spike protein - the part that helps it enter human cells.



**Departmental activities**

- World food day celebration
- Guest lecture
- Workshop for school teachers
- Rose plantation

"Education is the passport for future, tomorrow belongs to those who prepare for today" **Malcolm X.**