

## COVID 19 - The Start of Distant Socializing

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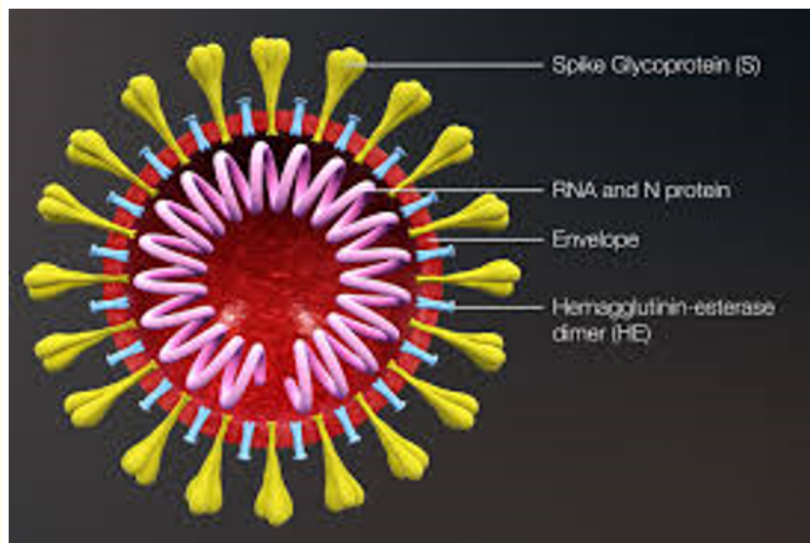
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### What is Covid 19 pandemic and present and future scenario from a pulmonologist's view

Novel Corona Virus derives its name from two things --- novel signifying new and Corona signifying 'crown'. Deemed to have originated from the Chinese Sea Food Market and first transmission was believed to be from animals to man.



Corona virus is primarily a respiratory pathogen. The structure has a lipid envelope and there are glycoprotein club shaped projections that adhere to the ciliary epithelium causing disruption and hence the infection.

An RNA virus that replicates by entering into cells and injecting their genome into genetic material.

The communicability of the virus is abnormally huge because of its amazing property to stay on surfaces for long. It has been found in studies that this virus resides on plastic, wood and glasses for upto 72 hours and lowest upto 4 hours on copper. It however can stay in air for upto 3 hours and spread as aerosols.

The lipid envelope of the virus has made it vulnerable to some particular things like soap, hot water and alcohol. Soap being a micelle helps in cutting of the lipid bi-layer and disintegration of the virus particle. Heat melts fat, hence water above 25 degree Celsius should

preferably be used to clean surfaces in contact with Corona virus. Alcohol above 60% concentration has been found to be very useful in hand sanitizing in this scenario. But again, consuming alcohol has been found to be not beneficial in combating the virus.

The virus needs moisture to be stable. Hence dehumidified, warm or bright conditions are most suitable for its degradation.

The pH of corona virus is 5.5 - 8.5. So, foods having pH level above the mentioned, have been found to be beneficial in combating the virus. Among them includes lemon, lime, avocado, garlic, mango.

The present scenario is very alarming as, there has been already recorded more than 2 million deaths and millions affected with it. The 1918 Spanish Flu has a history of 3 - 5 million deaths in the 1<sup>st</sup> wave. A relaxation of norms had seen around 40 - 50 million deaths in the second wave. So, if we don't want to repeat history, it would be best to practice social distancing until the start of 2021 or till the cases become zero for consecutive 7 days atleast, whichever is earlier.

### Covid 19 from a pulmonologist's point of view

Primarily a respiratory pathogen, its action has largely been on the ciliary epithelium. Destruction of the ciliary layer, leading to accumulation of secretion and debris has been the basic fighting mechanism of the pathogen. It can affect any mucous membrane eye, nose or mouth and go downwards upto the alveoli. Asymptomatic cases pass off as mild sore throat or itching in the throat and severe cases present as severe respiratory distress. With no potential cure found at present we stand against it with few antivirals and ventilation at this point. Among the anti virals, remdesivir has been approved recently and being used now. Hydroxychloroquine has been found to be of no benefit and instead has caused more nuisance like cardiac arrest and hepatitis. Ventilation comes into effect when the patient has severe respiratory distress out of fibrosis of the lungs. Managing the patient as ARDS has been found to be beneficial. Prone ventilation has been found to be more efficacious. Recently plasma therapy has been approved as a rapid strategy to cure the patient.

### My own view on COVID19 being a frontline health care professional

I am currently posted as respiratory medicine incharge at a government hospital. I have checked already thousands of patients until now. The biggest problem I have been facing is proper testing kits. There have been hundreds of migrant labourers who have presented asymptomatic, they have been quarantined at their respective homes. There have been 2 problems in this regard-they did not follow the advice of quarantine and started breaking rules and secondly not imposing strict lockdown norms in the town. I have examined about 905 cases who are proper suspects, among them approximately 710 cases were asymptomatic, absolutely no symptoms (78.45%). Around 180 cases presented with mild cough, slight day time rise of temperature and running nose (19.88%). Rest 15 cases have presented with significant fever, dry cough or sore throat. Now there are two problems which I faced. This is already a Flu season in India and there are reports of many allergic bronchitis cases every year during this spring. And due to the continued smoking and increase in COPD cases every year, it was difficult to sort out the real COVID 19 cases among them. Well we have dedicated COVID hospitals here and around 8 cases were referred to them for testing. Rest have recovered with conservative management and medications.

### Do's and don'ts

Healthy lifestyle and clean practices are the basic protective norms in combating the disease. Regular and frequent hand washing, cleaning surfaces with warm water, discarding outside clothes outside the home premises, cleaning vegetables before cooking are the best practices that can be done at present. Again this has limitations based on country's climatic conditions.

There have been some guidelines from Ayurvedic society of India about some basic home remedies like using honey, ginger water but have no proven benefit.

### **Herd immunity in COVID19. Is it possible?**

As per my views are concerned, Herd immunity will be a dangerous tool to practice. For Herd immunity to be successful we need maximum persons with antibodies which is possible only when people are either vaccinated or previously infected. But in this scenario if herd immunity is practiced, we might be losing half the population to the virus.

### **Myth**

It is a myth that a viral infection once developed doesn't attack again. Corona virus produces antibodies that wanes off in 2 years. So, you would probably need a shot of the vaccine if discovered in endemic and epidemic zones.

Animals have not been reported to be affected much, what's the reason? Do their blood have any antibodies? Up for the researchers to find out now.

On a lighter note: Finally, we are breathing fresh air, isn't it? Dolphins are returning to canals, Ganga water is becoming fit for drinking, visibility has increased due to less pollution. Good effects are pouring in from the environment atleast.

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