

Insight To Pandemic Covid-19: Analysis, Statistics And Prevention

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Abstract: Pandemic is outbreak of infectious disease that spread over the world wide geographic area and causes mass economic, social and political disruption. In this digital world when a virus comes and attacks the whole world; it is unbelievable. COVID 19 named coronavirus captured the whole world in its fingers. How the COVID 19 is increasing its arena and how the people are infecting, it is known to all. In this article, the impact of COVID-19 infection in India is discussed. How rapidly it is increasing and at what stage it is reached so far; is discussed in the paper. The analysis and the relative statistics are shown in the paper which includes the rate of suffering, the ratio of recovery from this killing disease. The paper also focuses on the statistics of the world and the impact of coronavirus on developed countries like USA, Italy, Spain, and China. In the last section, the remedial plan with minimum effort is mentioned so that at least we can resist ourselves to come in contact with corona. It can be hard to say that when we will get escaped from this hazardous situation or able to win the battle against the coronavirus. The paper focuses on the statistics of the world and the impact of coronavirus on developed countries like USA, Italy, Spain, and China; and comparison with India. In Paper, the analysis, statistics, and Prevention; all three things are covered.

Keywords: Coronavirus, COVID 19, Immunity, India, Pandemic, Prevention Plan, Remedial plan.

1. INTRODUCTION

COVID-19 outbreak started from Wuhan China in December 2019 [5]. Worldwide 212 countries got affected by this pandemic till 15 April 2020. There is total of 2084735 confirmed cases around the world among which 134685 deceased and 515462 recovered [1]. In India, the first case reported on January 30 and rises up to 11,625 Confirmed cases, 1366 recovered cases and 398 deaths till April 15, 2020. The analysis is shown in the below figures and graphs: the weekly analysis shows its spreading fast. All the data which is shared in the paper is till April 15, 2020 midnight.

Table 1: COVID-19 impact in India till 15 April 2020 midnight [1][2][3]

Week	Confirmed	Recovered	Deceased
Week1 - 30 Jan	1	0	0
Week2 - 7 Feb	3	0	0
Week3 - 14 Feb	3	1	0
Week4 - 21 Feb	3	3	0
Week5 - 28 Feb	3	3	0
Week6 - 6 March	31	3	0
Week7 - 13 March	91	10	1
Week8 - 21 March	256	23	4
Week9 - 28 March	883	75	19

Week10 - 3 April	3105	230	86
Week11 - 10 April	7600	786	252
Week12 - 15 April*	11625	1366	398

There is an exponential rise in COVID cases within weeks and months since the beginning. The below statistics shows the reality of the increase in cases in India in shown in table 1. Figure 1 shows the number of cases in graphical form in India till 15 April 2020 midnight.[1][2]

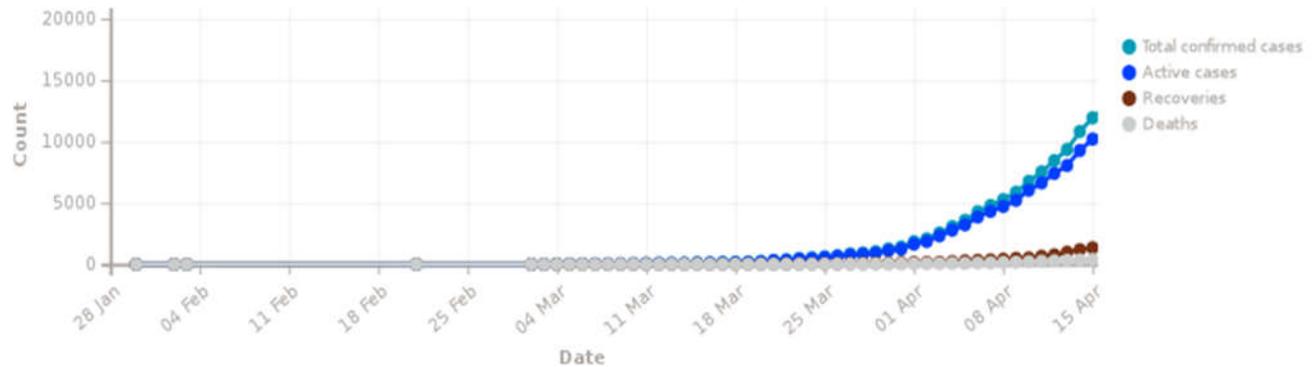


Figure 1: Impact of COVID-19 in India till 15 April 2020 midnight

In various conditions, it can be seen that other countries including the developed ones are more infectious from coronavirus. The number of deaths and the number of patients from this disease is much more in comparison to India as we compare the country's population. If we compare the data increase in cases from the world. There are total 2084735 confirmed cases around the world among which 134685 deceased and 515462 recovered.[1] If we see the data of countries most affected by covid 19 is:

Table 2: Country-wise details of infected people

Country	Confirmed	Recovered	Deceased
USA	644348	28554	48708
China	8234	77892	3342
India	12456	1513	423
Italy	165155	38092	21645
Spain	180659	70853	18812
Germany	134753	77000	3804
France	147863	30955	17167
UK	98476	0	12868
Iran	76389	49933	4777
Switzerland	26336	15400	1239
South Korea	10613	7757	229
Saudi Arabia	5862	931	79
Pakistan	6505	1645	124

2. LITERATURE SURVEY

The world Health organization(WHO) declared COVID-19 a pandemic on 11 march 2020. COVID-19 is not the first pandemic to take over the whole country. As the population is increasing the so the pandemic is but not ever outbreak of virus becomes pandemic. There have been lot of pandemic in the pandemic and today we are facing COVID-19. Since earliest days of human life diseases played a major role in mortality. Some diseases effects individual but some affect community and society and spread of

these increases dramatically and shows drastic loss to life and economy. There are some epidemic that turns to pandemic and created disruption are Malaria, tuberculosis, leprosy, influenza, smallpox, and others first appeared during these early years. As the humans are getting advance and civilized the more pandemic are going to occur.

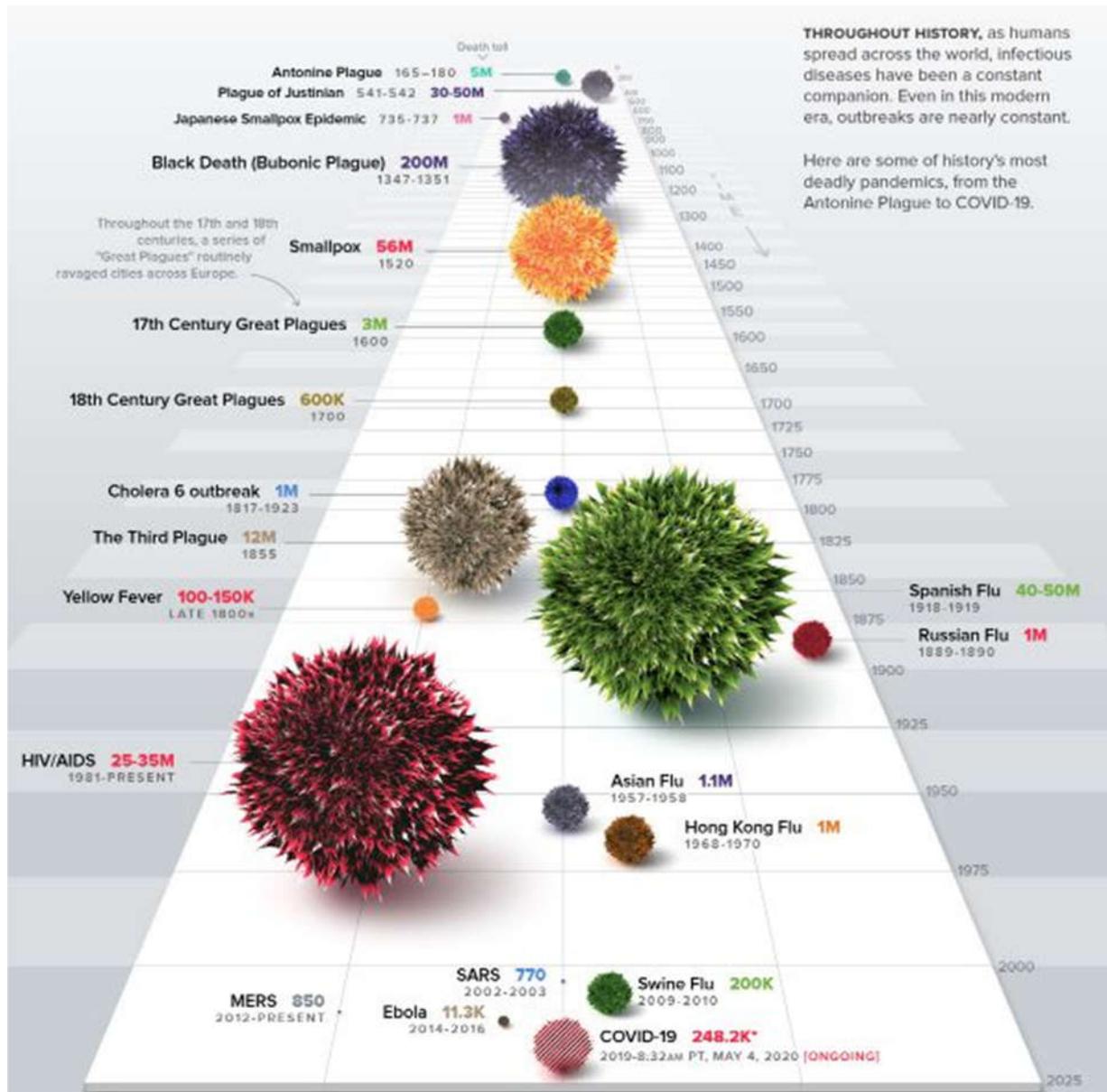


Figure 2: History of Pandemic[17]

In the table given below we have discussed about some major pandemic and its cause and disruption. There had been some others are that also disturbed the growth of human and environment but due to their spread culture they were considered as epidemic. The epidemic spread to particular community at particular time. In earlier times also there was a practice of quarantine and social distancing to spread the virus. But most of the viruses do not spread from human to human like the novel coronavirus does. World world is behind to stop the spread of this virus.

Table 3: Earlier Outbreaks of viruses[17]

Name of outbreak	Year	Type of virus	Population Deceased
Plague of Athens	430-426 BCE		Quarter of population
Antonine Plague	165-180 AD	Smallpox or measles	5 Million(one third of population)
Plague of Justinian	541-542 AD	Yersinia pestis bacteria/ Rats, fleas	30-50 Million(half of population)
Black Death	1347-1351	Yersinia pestis bacteria / Rats, fleas	200 Million (More than half of population)
Spanish flu	1918-1920	H1N1 virus / Pigs	40-50 Million (One third of population)
HIV/AIDS	1981-till present	Virus / Chimpanzees	25-35 million globally
Covid-19	2019	Unknown yet-(possibly pangolins)	134,685 Till 15 April 2020*

3. TESTING OF CASES FROM CORONAVIRUS

The government of India in association with ICMR rigorously working day and night to find the infected people and cure them. Proper measures are taken care and the people are kept in a quarantine of the period of 14 days as recommended by WHO. Various labs are reserved only for the testing purpose of COVID 19 and all the tests are free of cost. Figure 3 shows the day-wise number of tests starting from the 19th March 2020 till 15th April 2020. Figure 4 shows the graph of the total number of tests starting from the 18th March 2020 till 15th April 2020. [3][4]

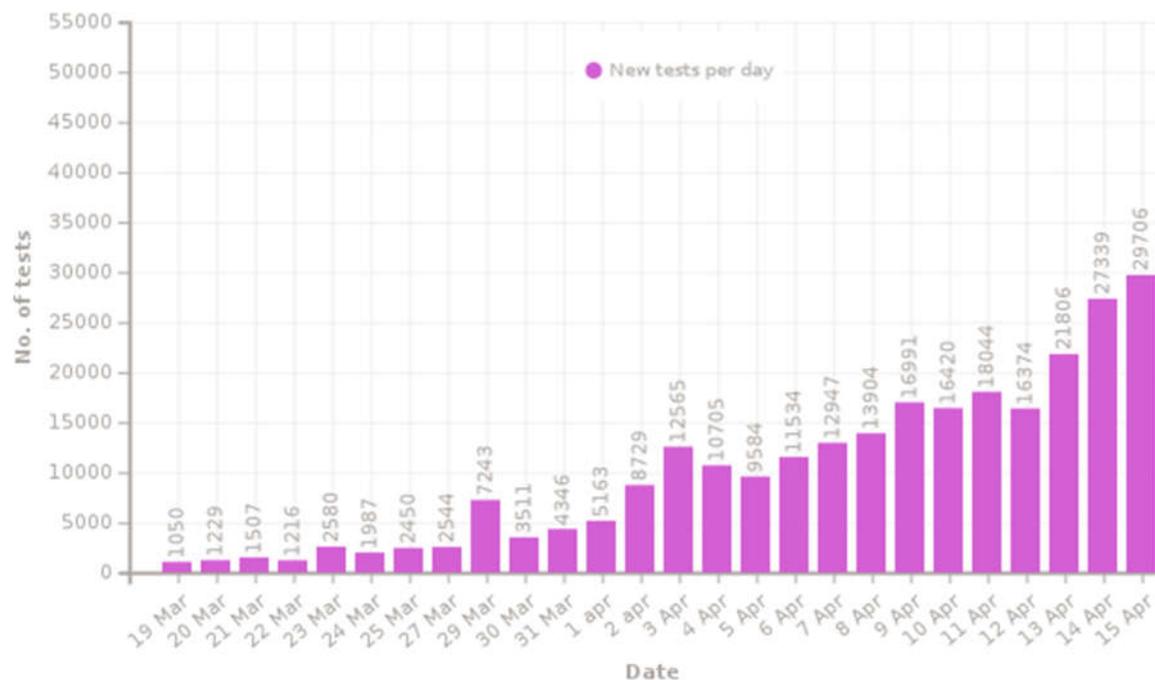


Figure 3:Day-wise number of tests in India

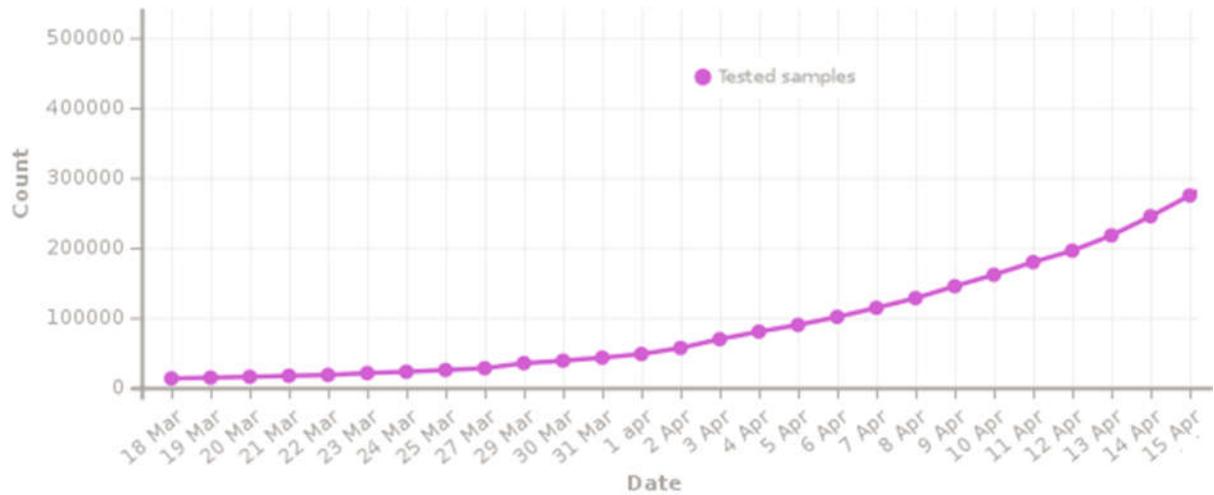


Figure4: total number of tests in India till 15 April 2020

In USA, the maximum number of victims is found. The countries with best medical facilities and best technologies are unable to prevent the pandemic coronavirus. Figure 5 shows the active, recovered and deceased cases in USA till 15 April 2020. Figure 6 indicates the record of active, recovered and deceased cases in Italy.



Figure 5: Active, recovered and deceased cases in USA



Figure 6: Active, recovered and deceased cases in Italy

As it is observed that the number of cases in India is not that much as compared to other countries. Figure 7 shows India's data. That is due the very immediate steps taken by Indian government. There are some developed countries like America that are badly affected by the pandemic, as the rules were imposed there very late and the government doesn't take immediate steps to spread the virus.



Figure 7: Active, recovered and deceased cases in India

4. IMPACT OF COVID 19 ON WORLD

The COVID-19 spread across the countries like the flames of fire. Coronavirus is a highly transmittable and pathogenic viral infection. The effect is directly on the respiratory system. It's severe syndrome coronavirus 2 (SARS-CoV-2), which emerged in Wuhan, China and spread around the world.[5] Various researchers gave their perusal about the pandemic virus. Some scientists link this with physic theory and some has bounded it with mythological stories. Some of the persons also said about the World war 3 attack. The situation is nevertheless a natural calamity for humanity.

Lai, C et al. (2020) discussed the study in Taiwan Society of Microbiology about the cases from COVID 19. How the different people of various age groups, gender, and existing disease persons infected from coronavirus. In their paper, they insight the medical treatment and the laboratory tests in China. How the transmission of the virus happening from person to the society and how the cases are increasing day by day. [6] Kooraki, S. et al. (2020) highlights the symptoms and the checks for analyzing the disease in persons. The Novel COVID-19–infected pneumonia (NCIP) is characterized by fever, fatigue, dry cough, and dyspnea. The authors thoroughly discussed about all the symptoms and signs which turns to the corona symptoms. How long a particular disease will persists in human body and how the radiology can help in treating with the COVID 19 attach is discussed in their research. [7]

Many of the cases are seen in the newly born babies. The direct link is through their parents, especially mother. Sonja A. Rasmussen (2020) discussed the impact of virus on pregnant ladies. This has happened to their kids might be at the time of caesarean deliveries, or through the mother, when the ladies came for check-up and tests[8]. Guo H et al. mentioned in their research paper about how to assess COVID-19 epidemic influenced peoples' utilization of emergency dental services in Beijing, China. Basically, in the paper, the method is discussed which shows how the first-visit patients seeking emergency dental services before or at the beginning of the COVID-19 epidemic were retrieved. There are various reasons for same but the major one is the demographic characteristics. Guo H et al. analyzed the reasons for visit and recorded the data. [9] Hellewell, J. (2020) showed the Feasibility of controlling COVID-19 outbreaks by isolation of cases and contacts. In their paper, authors discussed about the rate of replication of virus and their cases in a country. The life span of virus on various surfaces and materials, how to prevent the contact from material is also highlighted in their research article.[11]

Noah C Peeri et al. suggested the future plans for treating with coronavirus COVID 19. Various plans were discussed by the authors and how they can be implemented in Wuhan, China. Based on the study on various syndrome and the tests, authors had compared the virus impact with other viruses and infections. [10] Luo, H. (2020) also highlights the vaccine for prevention of corona virus disease. The practical results were not pretty appealing. The medicine compositions and the other components are discussed in the paper for treatment and vaccination and tested in China. Research evidence is also shown in their paper [12]. Many countries had claimed about the chloroquine anti-malarial *drug works well for the COVID 19. Even, various countries import the drug from India.* Christian A. Devaux (2020) also discussed about the same chloroquine *drug* and its impact on covid 19 patient [14].

On 30 January 2020, the WHO declared COVID-19 as the sixth public health emergency of international concern. SARS-CoV-2 is closely related to two bat-derived severe acute respiratory syndrome-like coronaviruses, bat-SL-CoVZC45 and bat-SL-CoVZXC21. It is spread by human-to-human transmission via droplets or direct contact, and infection has been estimated to have mean incubation period of 6.4 days and a basic reproduction number of 2.24–3.58. Lai C. (2020) discussed this study in detail in their research article [13][15].

5. REMEDIAL PLANS

As an impact, the coronavirus attacks on the immunity of one's body. Later, the respiratory system and other organs get infected. Certain measures can be followed to prevent the impact and to stop the spreading of dangerous coronavirus. WHO publishes the guidelines to follow to fight with the covid 19. People are following the guidelines of WHO, our honorable prime minister, Shri Narendra Modi, and ICMR officials are taking press conferences to aware people and spread awareness about the impact of coronavirus, how to prevent it and what steps to take if feeling infected. Indian government although Lockdown the states and territories till further notice to obey social distancing and avoid contact with people. As the virus is contagious and spreads mainly from person to person this is called person to person spread. The three main things from where the infection is spreading are shown in figure 8.[4][16]

Along with the above measures, one most important app Arogya setu app launched by the government of India is beneficial for every Indian. This app updates about whether the corona patient is there in your nearby area or not so that a person can take care of itself. This app always says that maintain social distance, assess yourself that you are prone to infection or not. As it is proved by who that social distancing is the only way to won over coronavirus. Social distancing says. 1. Say hi without a handshake. 2. Avoid social gatherings. 3. Keep 6 feet distance from people.



1.Human Contact



2.Air Transmission



3.Contaminated Objects

Figure 8: Three things to avoid preventing coronavirus

During COVID outbreak how to protect yourself and others. Do’s: 1. Practice frequent hand wash with soap and water or one can use alcohol-based hand sanitizer. 2. Cover your nose and mouth while with handkerchief or tissue while sneezing and coughing. 3. Throw used tissue into closed bins immediately. 4. Go to the doctor if you feel unwell(fever, difficult breathing and cough). Cover your mouth and nose wear masks while going to see a doctor. 5. If you have symptoms of COVID call immediately on helpline numbers of the ministry of health and family. Avoid large gatherings. Don't: 1. having closed contact with anyone. If you are expiring cough and fever. 2. Touching your eyes, nose ,and mouth. 3. Spit in public.

Here in India there are some of the key practices that have been suggested by the Ministry of AYUSH to ensure the health and well-being of all Indians. to boost immunity and PM also appealed to every Indian to follow those guidelines to stay away from COVID and stay safe. It has been advised to incorporate these everyday practices to your daily routine for the general upkeep of your health:

Table 4: General routine practices

<ul style="list-style-type: none"> • Drink warm water daily. 	
<ul style="list-style-type: none"> • Practice the art of meditation including Yoga and Pranayam for at least 30 minutes everyday 	

<ul style="list-style-type: none"> • Make sure you add spices like Haldi, Jeera, Dhaniya and Garlic to your cooking to help ensure that you have a strong immune system that can fight this infection. 	
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Adnan Shereen et al.(2020) also discussed various methods that how the work is going on in developing the vaccinations to treat with this coronavirus and the therapeutic combinations to cope with this viral outbreak.[5] Every country is doing its best to find the anti-dot. Hope soon the successful vaccination will come to cope with this disease.

5.1. Ayurveda tested immunity-boosting techniques

These Ayurveda inspired techniques can be followed every day, as per the guidelines issues by the Ministry of AYUSH, to make sure your body's immunity is strong enough to fight off the novel coronavirus infection.

Table 5: Immunity booster methods

Item	Quantity to be taken	Frequency
Chyavanprash	1 teaspoon	Once in a day
Herbal concoction of Tulsi, Dalchini, Kalimirch, Dry Ginger(add lemon juice to taste as per like to add vitamin C)	1 teaspoon	Once or twice in a day
Haldi in a glass of warm milk	Half teaspoon	Once in a day
Application of sesame oil, coconut oil or ghee in both your nostrils	A pinch	Twice in a day
Take sesame oil or edible coconut oil and swish in your mouth for 2-3 minutes. Rinse your mouth with warm water afterwards[4][5]	One tablespoon	Once or twice in a day

5.2 Remedies for dry cough and sore throat

As the COVID-19 infection affects the respiratory system, the Ministry has recommended the following Ayurveda remedies for when you have a sore throat.

Table 6: Remedies for dry cough and sore throat

Process	Ingredients used	Frequency
Steam inhalation	Mint or Ajwain	Once a day
Natural herb mixture	Clove with honey	2-3 times a day
Herbal tea	Clove,cardamom,ginger,ajwain	Once a day
Ginger Tea	Ginger	Once or twice a day
Fruits intake	Orange, papaya, banana etc	Once or twice a day

In this situation, the target is to flow the phrase "Prevention is better than Cure". An advice is to flow the WHO and ICMR guidelines and boost the immunity to fight against coronavirus.

6. CONCLUSION

After the detailed study and lot of survey the author has come to the conclusion that the COVID-19 situation in India is under control. The situation would be better if people follow all the instructions and practices given by government of India like social distancing, general routine practices, Ayurveda immunity boosting techniques and home remedies. Along with the government, doctors and researchers are running behind the vaccine of novel coronavirus. The analysis states that soon the effect of pandemic will be reduced and world is going to live again.

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