

Coronavirus: Basic information and precautionary measures

Dr. Pavan B. Mandavkar

Principal, Indira Mahavidyalaya

Kalamb, Dist. Yavatmal, Maharashtra, India 445 401

Email: pavanmandavkar@hotmail.com

Mobile No. +91-9422867658

Abstract:

Corona viruses are a large family of viruses which may 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). The most recently discovered coronavirus disease is COVID-19. The COVID-19 epidemic has spread very quickly. It took only 30 days to expand from Hubei to the rest of China since first detected in December 2019. The virus has spread to over 210 countries and territories across the globe in 3 months, and was characterised as a pandemic by the WHO. ICTV announced 'severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)' as the name of the new virus. The most common symptoms of COVID-19 are fever, tiredness and dry cough. Some patients may have aches and pains, nasal congestion, runny nose, sore throat or diarrhea. This disease spreads primarily through contact with an infected person when they cough or sneeze through their droplets generated of saliva or discharge from the nose. People of all ages can be infected by the new coronavirus. Older people and people with pre-existing medical conditions, such as asthma, diabetes, heart disease, appear to be more vulnerable to becoming severely ill with the virus. To date, there is no vaccine and no specific antiviral medicine to prevent or treat COVID-19. Antibiotic is not useful in this disease. Also **hydroxychloroquine** has not yet been proven to cure coronavirus. It is still under clinical trial. Few countries have approved the use of convalescent plasma therapy as an experimental treatment in clinical trials and for critically ill COVID-19 patients without other treatment options. The most effective way is to protect yourself and others against COVID-19 by frequently cleaning your hands with an alcohol based hand rub or with soap and water, covering your cough with the bend of elbow or tissue, and maintaining a distance of at least 3 to 6 feet from people who are coughing or sneezing and avoiding touching eyes, nose or mouth and following good respiratory hygiene. Stay home if you feel unwell. If you have a fever, cough and difficulty breathing, seek medical attention and call in advance.

Today the world is worried about increasing number of COVID-19 cases. In future, the cases of the COVID-19 may start decreasing when enough people develop immunity, either through infection or vaccination. Another possibility is that the virus will continue to circulate and establish itself as a common respiratory virus. Every beginning has an end and every end has a new beginning. But instead of waiting for future, people must take steps to reduce the spreading of this virus by precautionary measures and following the guidelines by authorities.

Key words: Coronavirus disease, COVID-19, SARS-CoV-2, WHO, vaccine, fever, cough

Introduction:

This is not a *scientific or medical research paper for deep study, but an article of basic information and the precautionary measures about new coronavirus*. An outbreak of 2019 novel coronavirus diseases (COVID-19) in Wuhan, China has spread quickly worldwide. The coronaviruses have been recently classified as a separate virus genus on the basis of several fundamental characteristics. Coronavirus particles appear medium-sized, round, and moderately pleomorphic and bear characteristic widely-spaced club-shaped surface projections. Coronaviruses naturally infect human beings, chickens, pigs, rats etc., causing a wide variety of disorders involving a number of different organ systems. New species are

being added at frequent intervals as the techniques of electron microscopy and modern virology are applied to diseases which have often been clinically recognized for decades.

In December 2019, a novel strain of coronavirus - SARS-CoV-2 - was first detected in Wuhan, a city in China's Hubei province with a population of 11 million, after an outbreak of pneumonia without an obvious cause. The patient had the symptoms since November 2019. This virus has spread very quickly to over 210 countries and territories across the globe, and was characterised as a pandemic by the World Health Organization (WHO) on 11 March 2020.

Coronaviruses are types of viruses that typically affect the respiratory tracts of birds and mammals, including humans. Doctors associate them with the common cold, bronchitis, pneumonia, severe acute respiratory syndrome (SARS), and COVID-19. They can also affect the gut. These viruses are typically responsible for common colds more than serious diseases. Scientists have found that different types of coronaviruses can infect mice, rats, dogs, cats, turkeys, horses, pigs, and cattle. Sometimes, these animals can transmit coronaviruses to humans.

This article gives a brief overview of the new virus COVID-19, with different types of human coronaviruses, SARS and MERS, their symptoms, and how people transmit them. Basic information of COVID-19 and protective measures against the coronavirus are mentioned in the form of question-answers in simple language. The information and the precautionary measures explained in this paper are as per declared by WHO and by different authorities of different countries including India. It is possible to control spreading of coronavirus by following these precautionary measures. Data and information given in this article is up to the date 12th April 2020.

What are coronaviruses?

The coronavirus is a family of viruses that can cause a range of illnesses in humans including common cold and more severe forms like SARS and MERS which are life-threatening. Severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) are also caused by coronaviruses. According to the World Health Organization, MERS is a viral respiratory disease that was first reported in Saudi Arabia in September 2012 and has spread to 27 countries. Some people infected with MERS coronavirus (MERS-CoV) develop severe acute respiratory illness, including fever, cough, and shortness of breath. From its emergence till date, WHO confirmed 2,519 MERS cases and 866 deaths. Among all, about 80% cases have occurred in Saudi Arabia. Only two people in the United States have tested positive for MERS-CoV, both of whom recovered. They were healthcare providers who lived in Saudi Arabia, where they likely were infected before traveling to the U.S., according to the CDC (The Centers for Disease Control and Prevention).

Infection with SARS coronavirus (SARS-CoV) can cause a severe viral respiratory illness. SARS was first reported in Asia in February 2003, though cases subsequently were tracked to November 2002. SARS quickly spread to 26 countries before being contained after about four months. More than 8,000 people fell ill from SARS and 774 died. Since 2004, there have been no reported SARS cases, according to NIH (National Institutes of Health), U.S.

Researchers first isolated a coronavirus in 1937. They found a coronavirus responsible for an infectious bronchitis virus in birds that had the ability to devastate poultry stocks. Scientists first found evidence of human coronaviruses (HCoV) in the 1960s in the noses of people with the common cold. Two human coronaviruses are responsible for a large proportion of common colds: OC43 and 229E. The name 'coronavirus' comes from the crown-like projections on their surfaces. 'Corona' in Latin means 'halo' or 'crown.'

What is COVID-19?

COVID-19 is the infectious disease caused by the most recently discovered corona virus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. Coronavirus disease is an infectious disease caused by a new virus. The disease causes respiratory illness (like flu) with symptoms such as a cough, fever, and in more severe

cases, difficulty breathing. Among humans, coronavirus infections most often occur during the winter months and early spring. People regularly become ill with a cold due to a coronavirus and may catch the same one about 4 months later. Coronavirus antibodies do not last for a long time. Antibodies for one strain of coronavirus may be ineffective against another one.

Since December, 2019, COVID-19 has affected millions of patients globally. COVID-19 is caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and has a case-fatality rate of 2 to 3%, with higher rates among elderly patients and patients with comorbidities. (The word 'comorbidity' is common medical term. Comorbidity refers to one or more diseases or conditions that occur along with another condition in the same person at the same time.) Person-to-person transmission is efficient, with multiple clusters reported. Patients with COVID-19 present with respiratory symptoms, which is very similar to the presentation of other respiratory virus infections.

SARS-CoV-2 is a new strain of coronavirus that has not been previously identified in humans. SARS-CoV-2 belongs to a family of single-stranded RNA (Ribonucleic acid) viruses known as coronaviridae, a common type of virus which affects mammals, birds and reptiles. In humans, it commonly causes mild infections, similar to the common cold, and accounts for 10–30% of upper respiratory tract infections in adults. More serious infections are rare, although coronaviruses can cause enteric and neurological disease.

What is the official name of the new coronavirus disease?

ICTV (International Committee on Taxonomy of Viruses) announced 'severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)' as the name of the new virus on 11 February 2020.

Is the COVID-19 disease a pandemic?

The World Health Organisation (WHO) on 11.03.2020 has characterized COVID-19 as pandemic. This disease spread over 210 countries very quickly.

Is COVID-19 the same as SARS?

No. The virus that causes COVID-19 and the one that caused the outbreak of Severe Acute Respiratory Syndrome (SARS) in 2003 are related to each other genetically, but the diseases they cause are quite different. SARS was more deadly but much less infectious than COVID-19. There have been no outbreaks of SARS anywhere in the world since 2003.

Where has the new coronavirus come from?

It is currently unclear where the virus has come from. The recent outbreak of coronavirus is believed to have occurred in a market for illegal wildlife or sea food market in the central Chinese city of Wuhan. Wuhan is the capital city of Hubei province in the People's Republic of China. It is the largest city in Hubei and the most populous city in Central China with a population of over 11 million. It subsequently spread from animal to human. Mammals such as camels and bats have been implicated in previous coronavirus outbreaks, but it is not yet clear, the exact animal origin, if any, of SARS-CoV-2. Different health authorities, laboratories from all over world and the WHO are investigating the outbreak of the recent coronavirus.

What are the symptoms of COVID-19? How is COVID-19 diagnosed?

The most common symptoms of COVID-19 are fever, tiredness, and dry cough. Some patients may have aches and pains, nasal congestion, runny nose, sore throat, myalgia, diarrhea or even struggling for breath. These symptoms are usually mild and begin gradually. Some people become infected but don't develop any symptoms and don't feel unwell. Most people (about 80%) recover from the disease without needing special treatment. Around 1 out of every 6 to 8 people, differ from countries, who gets COVID-19 becomes seriously ill and develops difficulty breathing. Older people, and those with underlying medical problems like high blood pressure, heart problems or diabetes, are more likely to develop serious illness. In more severe cases infection can cause pneumonia, severe acute respiratory syndrome, and even death. The period within which the symptoms would appear is 2-14 days.

In severe cases, the coronavirus can cause pneumonia and severe acute respiratory syndrome. The case definition for COVID-19 was amended on 13 March 2020 and is now based on symptoms regardless of travel history or contact with confirmed cases. Diagnosis is suspected

in patients requiring admission to hospital with signs and symptoms of pneumonia, acute respiratory distress syndrome or influenza, continuous cough or fever. A diagnostic test has been developed and countries are quarantining suspected cases.

How coronavirus spreads?

Coronavirus is a respiratory virus. This disease spreads primarily through contact with an infected person when they cough or sneeze through their droplets generated of saliva or discharge from the nose. It also spreads when a person touches a surface or an object that has the virus on it, and then touches 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 droplets.

Can the coronavirus disease spread through air?

Studies to date suggest that the virus that causes COVID-19 is mainly transmitted through contact with respiratory droplets rather than through the air. It is transmitted through droplets generated when an infected person coughs, sneezes or speaks. These droplets are too heavy to hang in the air. They quickly fall on floors or surfaces. You can be infected by breathing in the virus if you are within 3 feet of a person who has COVID-19, or by touching a contaminated surface and then touching your eyes, nose or mouth before washing your hands.

Can COVID-19 be caught from a person who has no symptoms?

The main way the disease spreads is through respiratory droplets expelled by someone who is coughing. The risk of catching COVID-19 from someone with no symptoms at all is very low. However, many people with COVID-19 experience only mild symptoms. This is particularly true at the early stages of the disease. It is therefore possible to catch COVID-19 from someone who has, for example, just a mild cough and does not feel ill.

Can I catch COVID-19 from the feces of someone with the disease?

The risk of catching COVID-19 from the feces of an infected person appears to be low. While initial investigations suggest the virus may be present in feces in some cases, spread through this route is not a main feature of the outbreak. This problem is mostly in villages of poor countries or slum areas where people are not using toilets.

Who is most at risk for the coronavirus disease?

People of all ages can be infected by the new coronavirus. Older people and people with pre-existing medical conditions (such as asthma, diabetes, and heart disease) appear to be more vulnerable to becoming severely ill with the virus. They must take extra precautions. It is advised to people of all ages to take steps to protect themselves from the virus by following good hand hygiene and good respiratory hygiene.

Can babies and children get the coronavirus disease?

Any age to be infected with the virus, but so far there are relatively few cases of COVID-19 reported among babies and children.

Is it safe to receive a package from any area where COVID-19 has been reported?

Yes. The likelihood of an infected person contaminating commercial goods is low and the risk of catching the virus that causes COVID-19 from a package or a parcel that has been moved, travelled and exposed to different conditions and temperature, is also low.

Is there anything I should not do?

The following measures are not effective against COVID-2019 and can be harmful: Smoking, wearing multiple masks, taking antibiotics or other drugs without medical supervision.

Is it safe to use a swimming pool?

Swimming in a well-maintained, properly chlorinated pool is safe. However, it is advisable to stay away from all crowded areas including crowded swimming pools. Keep 3 to 6 feet distance from people who sneeze or cough even in a swimming area.

Is it necessary to drink water every 15 minutes to protect from coronavirus?

There is no scientific evidence to suggest that drinking water frequently can protect you from COVID-19 or flush out the virus. However, it is recommended that one should have about six to eight glasses of water every day.

Should we eat curry, rasam or spicy food to protect us from coronavirus?

There is no scientific evidence to prove that eating curry, rasam or spicy food could keep you from being infected from coronavirus.

Can orange, mango, lemon or turmeric prevent coronavirus?

There is no scientific evidence that orange, lemon or turmeric prevents COVID-19. However, it is recommended consuming adequate fruit and vegetables as part of a healthy diet. Anti-inflammatory properties present in the turmeric milk helps manage digestive issues by promoting digestion, preventing stomach ulcers and diarrhoea.

Is it true that the sunlight kill the new coronavirus?

There is no evidence of sunlight being able to kill the new coronavirus. But the morning sunrays are useful for our body.

Should we avoid eating frozen foods and ice-cream?

There is no scientific evidence that eating hygienically made frozen food and ice-cream spreads the coronavirus.

Should we stop eating chicken or non vegetarian food?

Eating hygienically prepared and well-cooked chicken or non vegetarian food is safe and does not cause the spread of the coronavirus.

Can you contract the coronavirus disease by touching a surface?

People could catch COVID-19 by touching contaminated surfaces or objects – and then touching their eyes, nose or mouth.

How long does the coronavirus last on surfaces?

It is not certain how long the virus that causes COVID-19 survives on surfaces, but it seems to behave like other coronaviruses. Studies suggest that coronaviruses may persist on surfaces for a few hours or up to several days. This may vary under different conditions like type of surface, temperature or humidity of the environment. When the virus becomes suspended in droplets smaller than 5 micrometers (known as aerosols) it can stay suspended for about a half-hour, researchers said, before drifting down and settling on surfaces where it can linger for hours. The virus lives longest on plastic and steel, surviving for up to 72 hours. But the amount of viable virus decreases sharply over this time. It does poorly on copper, surviving four hours. On cardboard, it survives up to 24 hours. It means packages that arrive in the mail should have only low levels of the virus - unless the delivery person has coughed or sneezed on it or has handled it with contaminated hands.

What is the incubation period of the coronavirus disease?

The 'incubation period' means the time between catching the virus and beginning to have symptoms of the disease. The incubation period of a coronavirus varies, but most estimates of the incubation period for COVID-19 range from 1-14 days and most commonly around five days. Researchers have indicated that SARS-CoV-2 may be infectious during its incubation period.

What is the recovery time for the coronavirus disease?

Using available preliminary data, the median time from onset to clinical recovery for mild cases is approximately 2 weeks and is 3-6 weeks for patients with severe or critical disease. People with COVID-19 generally develop signs and symptoms, including mild respiratory symptoms and fever, on an average of 5-6 days after infection (means incubation period 5-6 days, range 1-14 days). Most people infected with COVID-19 virus have mild disease and recover fast.

Can humans become infected with the COVID-19 from an animal source? Is this disease zoonotic?

Coronaviruses are a large family of viruses that are common in animals. Coronaviruses are zoonotic, means they are transmitted between animals and people. Occasionally, people get infected with these viruses which may then spread to other people. For example, SARS-CoV was associated with civet cats and MERS-CoV is transmitted by dromedary camels. Possible animal sources of COVID-19 have not yet been confirmed. To protect yourself, such as when visiting live animal markets, avoid direct contact with animals and surfaces in contact with animals.

Ensure good food safety practices at all times. Handle raw meat, milk or animal organs with care to avoid contamination of uncooked foods and avoid consuming raw or undercooked animal products.

Can I catch COVID-19 from my pet?

Research is going on. While there has been one or two instance like a dog being infected in Hong Kong, to date, there is no evidence that a pet can transmit COVID-19.

Can cold weather and snow prevent the coronavirus disease?

Cold weather and snow cannot kill the new coronavirus.

Can the coronavirus disease be transmitted in hot or humid climates?

From the evidence so far, the COVID-19 virus can be transmitted in areas with hot and humid weather. Regardless of climate, adopt protective measures if you live in, or travel to an area reporting COVID-19.

Is the coronavirus disease more severe than the flu?

COVID-19 causes more severe disease than seasonal influenza. While many people globally have built up immunity to seasonal flu strains, COVID-19 is a new virus to which no one has immunity. That means more people are susceptible to infection, and some will suffer severe disease. Globally, about 3 to 5% of reported COVID-19 cases have died on an average. By comparison, seasonal flu generally kills far fewer than 1% of those infected.

Are masks effective against the coronavirus disease?

If you are healthy, you only need to wear a mask if you are taking care of a person with suspected 2019-nCoV infection. Wear a mask if you are ill with COVID-19 like coughing or sneezing. Masks are effective only when used in combination with frequent hand-cleaning with alcohol-based hand rub or soap and water. You must know how to use mask and dispose of it properly. Disposable face mask can only be used once.

How to put on use take off and dispose of a mask?

A mask should be used by health workers, care takers and individuals with respiratory symptoms, such as fever and cough. Before touching the mask, clean hands with an alcohol-based hand rub or soap and water. Take the mask and inspect it for tears or holes. Orient which side is the top side (where the metal strip is). Ensure the proper side of the mask faces outwards. Place the mask to your face. Pinch the metal strip or stiff edge of the mask so it moulds to the shape of your nose. Pull down the mask's bottom so it covers your mouth and your chin. After use, take off the mask; remove the elastic loops from behind the ears while keeping the mask away from your face and clothes, to avoid touching potentially contaminated surfaces of the mask. Discard the mask in a closed bin immediately after use. Perform hand hygiene after touching or discarding the mask. Use alcohol-based hand rub or, if visibly soiled, wash your hands with soap and water.

Is there any vaccine, medicine or therapy that can prevent or cure COVID-19?

To date, there is no vaccine and no specific antiviral medicine to prevent or treat COVID-19. It may take few more days for a new vaccine to be developed. Possible vaccines and some specific drug treatments are under investigation in many countries. They are being tested through clinical trials. While some western, traditional or home remedies may provide comfort and alleviate symptoms of COVID-19, there is no evidence that current medicine can prevent or cure the disease. It is not recommend self-medication with any medicines, including antibiotics, as a prevention or cure for COVID-19.

What is the treatment for the coronavirus disease?

There is no specific treatment for disease caused by a novel coronavirus. However, many of the symptoms can be treated and therefore treatment based on the patient's clinical condition. As an example, many antiviral agents have been identified to inhibit SARS *in vitro*, but there are currently no approved antiviral agents or vaccines available to tackle any potential SARS or SARS-like outbreaks, such as MERS or SARS-CoV-2.

Do vaccines against pneumonia protect against the coronavirus disease?

No. Vaccines against pneumonia, such as pneumococcal vaccine and Haemophilus influenzae type B (Hib) vaccine, do not provide protection against the new coronavirus. The virus

is so new and different that it needs its own vaccine. Researchers are trying to develop a vaccine against COVID-19.

Are antibiotics effective in preventing or treating the COVID-19?

No. Antibiotics do not work against viruses. They only work on bacterial infections. COVID-19 is caused by a virus, so antibiotics do not work. Antibiotics should not be used as a means of prevention or treatment of COVID-19. It should only be used as directed by a physician to treat a bacterial infection.

What is hydroxychloroquine?

Hydroxychloroquine is a drug which is used in the treatment of malaria. It is used to treat the disease in areas where malaria is sensitive to chloroquine. It is an anti-inflammatory drug and so doctors also prescribe hydroxychloroquine for the treatment of rheumatoid arthritis (inflammation of joints) and lupus (an inflammatory disease when the immune system attacks its own tissues).

Is hydroxychloroquine (HCQ) really a cure for COVID-19?

No. **Hydroxychloroquine** has not yet been proven to cure coronavirus. It is still under clinical trial.

Does India use hydroxychloroquine (HCQ) to treat COVID-19 patients?

India does not use HCQ to treat coronavirus. ICMR (Indian Council of Medical Research) has said that hydroxychloroquine should not be used by healthy people and or seen as a proven cure for COVID-19 as yet. As an experimental study, ICMR has allowed use of hydroxychloroquine as a preventive treatment (prophylaxis) for high risk people, like healthcare workers in COVID care and direct contacts of COVID-19 positive patients. It has also allowed the use of hydroxychloroquine with Azithromycin only in severely ill COVID-19 patients. This is however under strict medical supervision. While the effectiveness of Hydroxychloroquine is still being tested, it has shown the ability to curb the spread of virus by preventing it from replicating. Doctors are of the opinion that if patients take it without prescription then it could be fatal. It could lead to irregular heartbeat arrhythmia and could prove fatal to people with impending breathing problems. So, do not take the anti-malarial drug hydroxychloroquine without prescription or under medical supervision.

Is the coronavirus pandemic likely to precipitate medicines shortages?

The answer of this question differs from country to country. The coronavirus pandemic has increased the risk of shortages of several essential medicines. Raw materials for many key drugs are manufactured in China, where factories have been disrupted by efforts to contain the virus. Raw materials manufactured in China exported to India and other countries where they are formulated into tablets or injections, for sale worldwide. Indian companies procure 70% of their raw materials with ingredients from China, where manufacturing is cheap. In response to shortages, India decided to provide its people with essential medicines and banned exports of key medicines. Also the governments of different countries banned the parallel export of chloroquine, because they are being tested as possible treatments for COVID-19. There has been a lot of attention in the media on the potential benefits of chloroquine and hydroxychloroquine in treating patients with COVID-19 but the different medical authorities throughout the world has warned that these medicines are not licensed to treat COVID-19 related symptoms or prevent infection and, until there is clear, definitive evidence that these treatments are safe and effective for the treatment of COVID-19, they should only be used for this purpose within a clinical trial.

In view of the humanitarian aspects of the pandemic, it has been decided that India would lift the ban and export paracetamol and HCQ in appropriate quantities to needy countries.

What is plasma therapy?

Few countries have approved the use of convalescent plasma therapy as an experimental treatment in clinical trials and for critically ill COVID-19 patients without other treatment options. The therapy, which takes antibodies from the blood of a person who has recovered from COVID-19 and transfuses those antibodies into a person sick with that virus, has long been used as a way to help kick start a person's immune system. The 100% results of this therapy have not

been reported yet. With a vaccine likely few days away, scientists hope that convalescent plasma therapy can help those sickest with the virus now.

How does plasma therapy work?

As people fight the COVID-19 virus, they produce antibodies that attack the virus. Those antibodies, proteins that are secreted by immune cells known as B lymphocytes, are found in plasma, or the liquid part of blood that helps the blood to clot when needed and supports immunity. Once a person has had the virus and recovered, that person has developed antibodies that will stay in their blood waiting to fight the same virus if it returns. Those antibodies, when injected into another person with the disease, recognize the virus as something to attack. In the case of the coronavirus, scientists say antibodies attack the spikes on the outside of the virus, blocking the virus from penetrating human cells.

How contagious is COVID-19?

Increasing numbers of confirmed diagnoses, including in healthcare professionals, has indicated that person-to-person spread of SARS-CoV-2 is occurring. The preliminary reproduction number (i.e. the average number of cases a single case generates over the course of its infectious period) is currently estimated to be between 1.4 to 2.5. It means that each infected individual could infect between 1.4 and 2.5 people. Similarly to other common respiratory tract infections, MERS and SARS are spread by respiratory droplets produced by an infected person when they sneeze or cough. Measures to guard against the infection work under the current assumption that SARS-CoV-2 is spread in the same manner.

What social distancing measures are to be taken?

During coronavirus transmission phase the social distancing measures, such as working from home and avoiding social gatherings, including weddings and other ceremonies as well as household isolation for those with symptoms are very important. All schools, colleges, restaurants, cafes, pubs, leisure centres, nightclubs, cinemas, theatres, museums and other businesses were also to be closed. A strict lockdown of affected cities or areas is must. All shops selling non-essential goods, libraries, playgrounds, gyms and places of worship must be closed. If people come out for essential goods, there should be a distance of minimum of 3 to 6 feet between them. Those with continuous cough or a high temperature or the persons coming from coronavirus affected area should self-isolate for 7 to 14 days from the onset of symptoms. Keep the patient at least two metres away from staff and other patients. Medical staff having symptoms of COVID-19, or live with someone experiencing symptoms, should stay at home.

Should I worry about COVID-19?

Illness due to COVID-19 infection is generally mild, especially for children and young adults. However, it can cause serious illness: about 1 in every 5 to 8 people, which differ as per countries. COVID-19 patient need hospital care. It is therefore quite normal for people to worry about how the COVID-19 outbreak will affect them. To protect ourselves, the first action is regular and thorough hand-washing and good respiratory hygiene. Secondly, follow the advice of your government health authorities and do not break restrictions. If you take proper precautions well in advance and follow the guidelines, you need not to worry.

Basic protective measures against the new coronavirus:

Stay aware of the latest information on the COVID-19 outbreak, available on the WHO website and through your national and local public health authorities. Most people who become infected experience mild illness and recover, but it can be more severe for others. Take care of your health and protect others by doing the following:

1. Wash your hands frequently

Regularly and thoroughly clean your hands with an alcohol-based hand rub or sanitizer or wash them with soap and water for 20 seconds. Washing your hands with soap and water or using alcohol-based hand rub kills viruses that may be on your hands.

2. Avoid touching your face (Eyes, Nose and Mouth)

Hands touch many surfaces and can pick up viruses. Once contaminated, hands can transfer the virus to your eyes, nose or mouth. Face is very sensitive part of the human body.

From there, the virus can enter your body and make you sick. You can protect yourself avoiding touch your hand to face.

3. Avoid close contacts

You can protect yourself avoiding close contact and maintaining the distance of at least 3 to 6 feet between yourself and anyone who is coughing or sneezing or people who are unwell. When someone coughs or sneezes they spray small liquid droplets from their nose or mouth which may contain virus. If you are too close, you can breathe in the droplets, including the COVID-19 virus if the person coughing has the disease. Maintaining distance from everyone, avoiding shake-hands may be more beneficial.

4. Practice respiratory hygiene

Droplets spread virus. By following good respiratory hygiene you can protect the people around you from viruses. Follow good respiratory hygiene. This means covering your mouth and nose with your bent elbow or tissue when you cough or sneeze. Then dispose of the used tissue immediately.

5. Cleaning surfaces

It is good to routinely clean any high-touch surfaces, like door handles and toilets. Regular household cleaners are effective, including bleach solutions and alcohol solutions. If somebody in your household has been diagnosed with COVID-19, then cleaning and disinfection becomes much more important and should be done more frequently.

6. If you have fever, cough and difficulty breathing

Stay home if you feel unwell. If you have a fever, cough and difficulty breathing, seek medical attention well in advance. Follow the directions of your local health authority. Your health care provider may quickly direct you to the right health facility. This will also protect you and help prevent spread of viruses and other infections.

7. Follow advice given by your health care provider

WHO, National and local authorities of each country will have the most up to date information on whether COVID-19 is spreading in your area. Stay informed on the latest developments about COVID-19. Follow advice given by your health care provider, on how to protect yourself and others from COVID-19.

8. If you have recently visited areas where COVID-19 is spreading

Follow the guidance of National and local authorities. Stay at home if you feel unwell. Avoiding contact with others and visits to medical facilities will allow these facilities to operate more effectively and help protect you and others from viruses. If you develop fever, cough and difficulty breathing, seek medical advice promptly as this may be due to a respiratory infection or other serious condition. Call in advance and tell your health care provider of any recent travel or contact with travelers. It will allow your health care provider to quickly direct you to the right health facility. This will also help to prevent possible spread of viruses like COVID-19.

9. Reduce the use of air conditioners, Keep the windows and doors open for fresh air

Few countries have issued an advisory asking people to restrict the use of air conditioners in view of COVID-19 pandemic citing the reason that the higher possibility of virus can sneak in through the AC vents. So, reduce the use of air conditioners. You can keep the windows and doors open for fresh air. But it may not be possible in many countries where use of air conditioner is common thing. Also stopping the use of ACs everywhere may impossible because of the type of their constructions and also due to different climate conditions.

Important tips to boost your immunity:

Our immune systems are designed to fight off sicknesses and viruses. The immune system can get worn down by many things typical of a modern life like lack of exercise, stress, unhealthy eating etc. This prevents our bodies from effectively fighting off sickness. So, go through the tips given below:

1. Light exercise

Light exercise and morning walk can be one of the best things to do to boost immunity.

2. Sleep as much as you need or when tired

Sleeping for sufficient time or 6 to 8 hours per day is important to rebuilding a struggling immune system. Sleep as much as you need or whenever you are tired.

3. Reduce Stress

Our stressed body produces stress hormones which tax the immune system. To reduce stress, take breaks when you need them. Learn stress-reduction techniques. Try to be happy at all the time.

4. Reduce inflammation and consume immunity-boosting vitamins

For healthy immune system, inflammatory foods like (extra) sugar, processed meat, vegetable oils, and alcoholic drinks should be avoided. It may not possible in many countries, but the use of these can be reduced. To support your immune system, you can eat immunity supporting foods like citrus fruits, garlic, broccoli, and spinach. If your immune system is already weak, it can also be helpful to supplement with key vitamins and minerals that may have become depleted like Vitamin B, C, D, and Zinc.

5. Stay away from toxins

Toxins can be devastating for the immune system. For example, mycotoxins from mold are notorious for destroying immunity. Many other toxins seem to have detrimental impact on immunity as well. So try to minimize exposure to chlorinated drinking water, food additives, aromatic hydrocarbons, heavy metals, pesticides and air pollution. Liver detoxification is essential to reduce toxins burden on our body.

By doing this, we cannot prevent ourselves from coronavirus but the fighting power or resistance power of our body may increase.

Conclusion:

In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as MERS and SARS. The most recently discovered coronavirus disease is named as COVID-19. The COVID-19 has spread very quickly to over 210 countries and territories across the globe and was characterised as a pandemic by the WHO.

Many countries around the world have seen outbreak of COVID-19. China and some other countries have succeeded in slowing or stopping their outbreaks. However, the situation is unpredictable, when we see the increasing figures of coronavirus affected in few developed countries of Europe and America.

Stay aware of the latest information on the COVID-19 outbreak, available on different government health authorities. You can reduce your chances of being infected or spreading COVID19 by taking some simple precautions. As there is no vaccine or medicine at present, the most effective way is to protect yourself and others against COVID-19 by frequently cleaning your hands with an alcohol based hand rub or with soap and water, covering your cough with the bend of elbow or tissue, and maintaining a distance of at least 3 to 6 feet from people who are coughing or sneezing and avoiding touching eyes, nose and mouth. Make sure you, and the people around you, follow good respiratory hygiene. Dispose of the used tissue and masks immediately. Stay home if you feel unwell. If you have a fever, cough and difficulty breathing, seek medical attention and call in advance. Avoid traveling to places, especially if you are an old person or have diabetes, heart or lung disease.

If a person who has recently visited (past 14 days) areas where COVID-19 is spreading, he must self-isolate by staying at home and if he begin to feel unwell, even with mild symptoms such as headache, low grade fever and slight runny nose. In case of fever, cough and difficulty breathing, seek medical advice promptly as this may be due to a respiratory infection or other serious condition. This will also help to prevent possible spread of COVID-19 and other viruses. For most people in most locations the risk of catching COVID-19 is still low. However, there are few places, cities or areas around the world where the disease is spreading. For people living in, or visiting, these areas the risk of catching COVID-19 is higher. Governments and health

authorities of different countries are taking vigorous action every time new cases of COVID-19 are identified. Be sure to comply with any local restrictions on travel, movement or large gatherings. COVID-19 outbreaks can be contained and transmission stopped, in different countries only if the guidelines of authorities are followed strictly.

Other than this, one possibility is that cases of the COVID-19 will start decreasing when enough people develop immunity, either through infection or vaccination. Another possibility is that the virus will continue to circulate and establish itself as a common respiratory virus. Every beginning has an end and every end has a new beginning. When life does not go as planned, breathe and remember that life's richness often comes from its unpredictability. The secret to a good life is to pay more attention to the beginnings than the endings. So, instead of waiting for the future days, people must take steps to reduce the number of infections or spreading of this virus in their area or country, like screening and aggressively testing for the virus, isolating cases, restricting mass gatherings, observing normal public health practices and good hygiene.

Resources and References:

1. Official websites of authorities of different countries including WHO.
2. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>
3. <https://www.who.int/southeastasia>
4. <https://www.mohfw.gov.in/>
5. <https://www.theguardian.com/us-news/2020/apr/04/how-long-does-coronavirus-live-on-different-surfaces>
6. <https://www.nih.gov/>
7. <https://nationalinterest.org/blog/buzz/study-coronavirus-death-toll-could-approach-or-exceed-world-war-ii-135587>
8. <https://www.theatlantic.com/health/archive/2020/03/how-will-coronavirus-end/608719/>



Paper Available at

1. SSRN: <https://ssrn.com/abstract=3573881> or <http://dx.doi.org/10.2139/ssrn.3573881>
2. Researchgate: https://www.researchgate.net/publication/340583863_Coronavirus_Basic_information_and_precautionary_measures
3. Indira Mahavidyalaya: http://www.indiramahavidyalaya.com/pdf_show.php?unum=608

