

COVID Awareness Issue

COVID 19: Pearls on Management

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What are coronaviruses?

Coronaviruses are a large family of viruses with some causing less severe common cold to more severe diseases such as severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome. Many coronaviruses are zoonotic and these viruses are positive-stranded RNA viruses with large genomes in size from 27-33kb.

Understanding the disease

The disease caused by the 2019-novel Coronavirus is termed as COVID-19. The World Health Organization has declared COVID-19 to be a pandemic and has a 10 times higher fatality rate than seasonal flu. The symptoms of COVID-19 appear within two to 14 days after exposure and include fever, cough, a runny nose, loss of taste, smell and progress to difficulty in breathing over 5-9 days. About 81% of people recover after exhibiting mild symptoms over 2-3 weeks, 5% develop significant shortness of breath due to reversible lung damage requiring oxygen support, 5% of people develop severe shortness of breath requiring ventilator support to open airways clogged with solidified mucus for 11-23 days in an intensive care unit. The physical age of many seriously ill patients being above 70-80 years, tobacco/alcohol use, comorbid conditions like diabetes and hypertension.

How does the disease spread?

It primarily spreads through the respiratory droplets of infected people in places that lack proper air circulation. Coronavirus-19 has been shown to float in the air for up to 3 hours after someone sneezes

or coughs and can be inhaled by another person entering the space. If a person touches a surface or object that has been infected by the virus and then touches his mouth, nose, or eyes, he may get infected

How can it be detected?

The virus can be detected using a Rapid Antigen Test for mass screening as well confirmed with RT PCR which is more sensitive.

What is the treatment?

For mild symptoms, experts recommend strict quarantine to one room for 2 weeks and wearing a mask all the time to reduce viral shedding. Before returning to normal activities, it is recommended to get a rapid antibody test. There is no current evidence from randomized controlled trials to recommend any specific treatment for suspected or confirmed severe COVID-19 patients. No specific antivirals are recommended for treatment of those suffering from respiratory ailment due to lack of adequate evidence from medical literature. After anecdotal efficacy, several trials are currently underway of convalescent plasma infusions, anti-virals, BCG vaccine, interferon inhalation, nitric oxide inhalation. The guidelines advise treating doctors to closely monitor patients with a severe acute respiratory infection for signs of clinical deterioration, such as rapidly progressive respiratory failure and sepsis, and apply supportive care interventions immediately. The application of timely, effective, and safe supportive therapies is the cornerstone of therapy for patients that develop severe manifestations of COVID-19.

Protecting yourself against COVID-19

Guidelines by the World Health Organization specify that one of the ways to reduce the risk of infection is by regularly and thoroughly cleaning one's hands with an alcohol-based hand rub or washing them with soap and water. Regular washing becomes important as the virus tends to be viable from hours to more than a day on different surfaces that are regularly touched with hands.

Washing with soap

The grime on our hands contains innumerable viruses and bacteria. Washing with water without using soap helps reduce the number of microbes but does not remove most of the virus and bacteria completely. Using soap, therefore, becomes far more effective in removing microbes. Viruses such as coronavirus, influenza-causing viruses, Ebola zika have their genetic material encased in a layer of fat called the lipid envelope. Soap molecule breaks the lipid envelope of the virus.

Alcohol-based hand sanitizers

Like soap, the alcohol present in hand sanitizers dissolves the lipid envelope, thus inactivating the virus. The alcohol also tends to change the shape or denature the mushroom-shaped protein structures that stick out of the lipid envelope. To be effective, the sanitizers should contain at least 70% alcohol. Unlike soap lather, the alcohol does not come in contact with all parts of the hand. So, care needs to be taken to use sufficient sanitizer to increase the coverage. This is the preferred method of removing live viruses on articles like mobile phones.

Using a mask

Medical masks help prevent the spread of coronavirus infection but if not available the CDC recommends any homemade cloth mask-wearing while in public. Transmission through droplets from coughing and sneezing is one of the major routes of virus spread. When worn correctly, a mask can reduce the risk of inhaling droplets containing the virus. With many studies showing that people infected with novel coronavirus transmit the virus even before symptoms show up, it may be prudent to wear a mask especially when the virus is spreading in the community.

Maintain Physical distancing

This is highly imperative. The WHO says that you should maintain at least 2 meters (6 feet) distance between yourself and anyone who is coughing or sneezing. This is because when someone coughs or sneezes they spray small liquid droplets from their nose or mouth which may contain the virus. "If you are too close, you can breathe in the droplets, including the COVID-19 virus if the person coughing has the disease," says the WHO. We recommend speaking softly as loud speaking has been shown to cause more microdroplet production and avoid hugging or shaking hands. This is a great time to implement the Vedic way of greeting others with our hands folded (Namaste).

Avoid touch on eye nose mouth

Hands can pick up viruses as they come in contact with many surfaces. It can then transfer the virus to your eyes, nose or mouth. From there, the virus can enter your body and can make you sick.

Practice respiratory hygiene

Cover your mouth and nose with your bent elbow or tissue when you cough or sneeze. Then dispose of the used tissue immediately in a trash can with a lid that closes securely.

Mental health

Studies indicate that people are becoming more paranoid withdrawn, increasing risks of depression, anxiety and even higher rates of suicide and divorce. To counter this, we create a worry-free psychological state using the various tools. Avoiding cluttering our minds with media exposure and mental inactivity can go a long way in fighting the virus. Each of us has a social responsibility to always give out positive messages to everyone we meet, appreciate and reassure them that this lockdown is inevitable and enjoy certain perks that come with it. Studies have shown that those who are mentally strong and happy, have robust immunity to fight all such viral infections. A depressed mood adversely affects our body's defense T-cell activity and compromises their ability to fight infections. In moderate to severe cases, we highly recommend home-based counseling by consulting a clinical psychologist.

Immune building measures

For people without any serious health conditions, the following nutrients may help beneficial immune response to an upper respiratory viral infection and prevent complications.

Zinc- for prevention take 30mg daily but higher doses over 75mg are recommended if started within 24 hours with the onset of symptoms, Vitamin C 500mg -1 gm daily, Vitamins D3 supplement

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