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Review Article

**A REVIEW ON COVID-19 PANDEMIC MODE OF SPREAD AND
PRECAUTIONARY MEASURES TO STOP ITS SPREADING**¹Ghulam Mohammad Jan, Mohd Syeed Shah ²¹Associate Professor Department of Chemistry, GDC Khan sahib Budgam,
J&K (India)²Associate Professor Department of Chemistry, Govt SAM Degree College Budgam,
J&K (India)**Article Received:** May 2021**Accepted:** May 2021**Published:** June 2021**Abstract:**

The purpose of our research is to providing a protocol to prevent the spread of SARS-CoV-2 infection in light of the limited information related to this coronavirus. In detail, we broke down and looked focused on proof based rules gave in the different nations influenced by this pestilence up till now. In addition, we broke down the suggestions for the counteraction and control of different pandemics brought about by different pathogens having a place with a similar group of coronaviruses or others that present similar instruments of transmission Coronavirus Disease 2019 (COVID-19) have emerged, and given the momentum nonappearance of exceptionally powerful endorsed antibodies or medications, best power approaches including physical hindrances are being utilized to counter infection spread. A significant reason for physical insurance from respiratory contaminations is eye, nose, and mouth security. Nonetheless, eye insurance with goggles is dangerous due to "misting", while nose/mouth assurance is confused by the breathing challenges related with non-valved respirators.

Key words: Coronavirus, Pandemic, Transmission, Preventative Measures.

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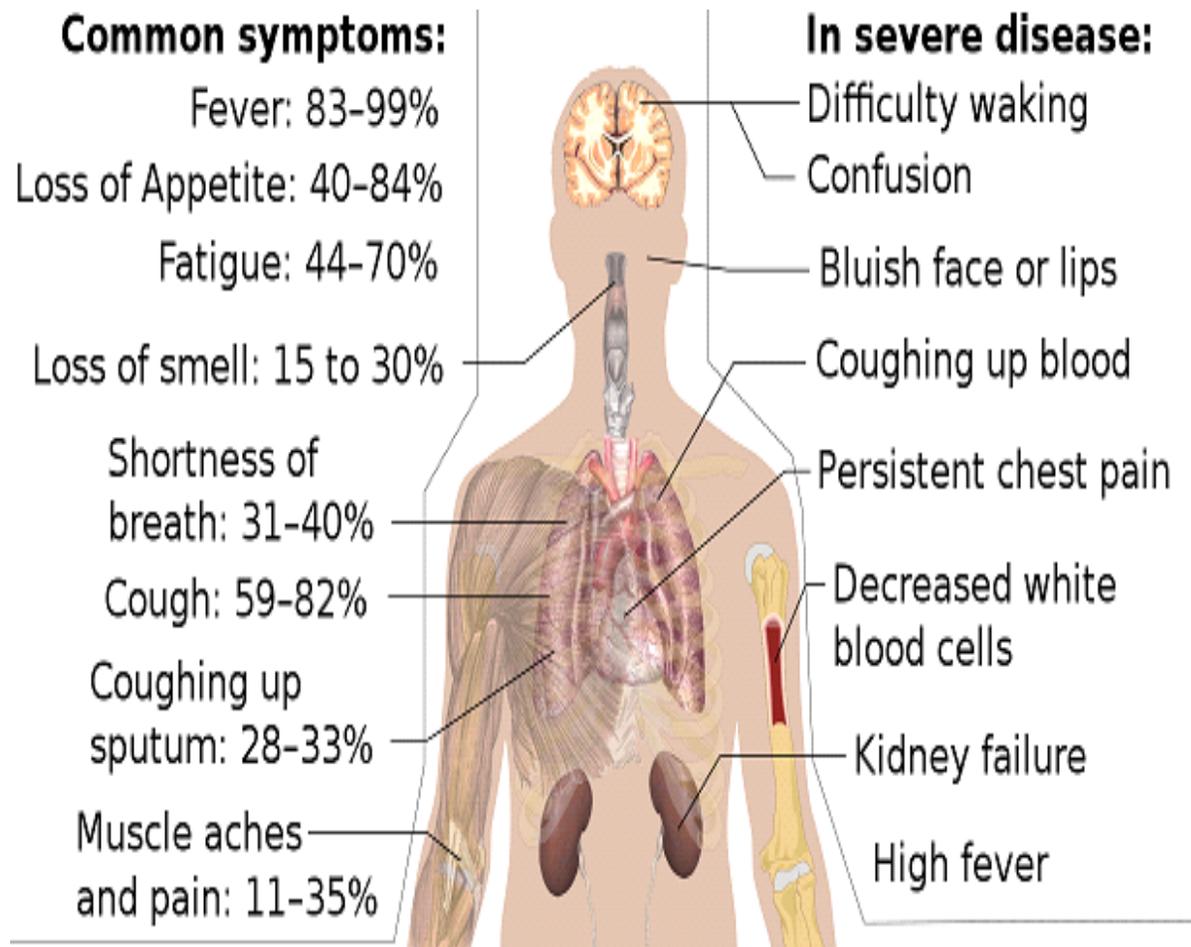
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INTRUDUCTION:

Coronavirus represents a large family of viruses. These Viruses mostly causes respiratory problems in human beings and also some more serious illness such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS Primary symptoms of illness includes common cold fever, sour throat, etc. [1] . The novel coronavirus (currently referred to as 2019-nCoV) was first detected in Wuhan, China, in December 2019 and appeared to originally affect people who had visited a seafood and animal market selling live games. China (Wuhan) is the epicenter of coronavirus [2]. Currently, this disease has affected 213 countries in the world [3].

MODE OF TRANSMISSION

As per the WHO situation report 12. The mode of infection of COVID-19 virus is similar to the other epidemic diseases caused by MERS (Middle Eastern Respiratory Syndrome) and SARS (Severe Acute Respiratory Syndrome) . The transmission usually occurs through droplet, aerosols and direct contact. The droplets are generated during coughing, Speaking and sneezing from any infected person can spread up to 1-2m, a recent study demonstrated that the infection could also occur from asymptomatic people and before the beginning of symptoms [4-5]



Symptoms of Corona virus

PREVENTION AND PROTECTION MEASURE**Administrative measure**

The administration has taken necessary steps to restrict the entries of persons working big companies, industries and the visitors. The access for importing or the exporting the goods was limited. Doing this aims to protect and prevent the probability of transmission of SARS-CoV-2. Persons that come from any other countries should be prevented to enter in countries, which are sensitive to COVID-19. The areas are called Red zone areas. For these area quarantine measure with active surveillance of those who are in contact with the COVID positive patient. in order to enable an eventual fiduciary home stay measure with active surveillance [6-9]. Following are the measures to be taken are:

- Delaying all tours to and from all areas defined as “red”, in which cases of COVID-19 infections have already been ascertained.
- Possible 14-day home quarantine for those who live, work or return from these areas.
- Careful control and measurement of body temperature of all suppliers and external collaborators.
- Dropping of the number of operators within each confined environment.
- Arrange, where possible, work from home (smart working).
- Composing, if possible, two or more closed and independent working groups, to be alternated every 14 days to work in the company or in smart working.
- Predisposition and maximum adherence to PPE dressing and undressing protocols

Environmental measure

Another measure is the environmental measure, which is very important in reducing the transmission of COVID-19 disease. Infection from one individual to another through objects, equipment or contaminated environmental surfaces can be reduced. There are various evidences, which show that the COVID-19 virus continues in optimal conditions of low humidity and low temperature. Some available evidences show the activity of COVID-19 virus can be reduced using the proper sanitization procedure. A sanitizer is the amalgamation of chemicals typically made up of sodium hypochlorite (0.1%–0.5%), ethanol (62%–71%) or hydrogen peroxide (0.5%), for an adequate contact time, providing adequate ventilation of closed rooms [10]; or through the use of physical means such as ultraviolet irradiation (UV) [11-12]. Following recombination should be done for the prevent the transmission COVID-19 are

- Reduce direct physical contact (for example, shake hands);

- Avoid direct unprotected contact with secretions (esp. coughing, touching used paper tissues with bare hands);
- Avoid direct contact within 2 m and >15 min;
- Reduce contact with people in a closed environment (esp. classrooms, meeting rooms, hospital waiting rooms, etc.) beyond 15 min and at a distance of less than 2 m

PERSONAL MEASURES**Hand washing**

Proper hand washing is the essential measure to prevent the transmission of SARS-CoV-2. Hands should be washed with soap and water for at least 40–60 s; if soap and water are not available, a 62%–71% alcohol-based hand disinfectant can also be used.

Hands washing procedure

- Before starting work, especially if this involves contact with the public;
- Frequently during the work shift, especially after contact with other staff or customers;
- After contact with secretions, excretions, biological liquids;
- After contact with potentially contaminated objects (gloves, clothing, masks, used tissues, waste);
- Immediately after removing gloves and other protective equipment.

PERSONAL PROTECTIVE EQUIPMENTS

Use devices that comply with the requirements of the technical standard EN 374, classified as third category PPE for protection from microorganisms (a CE certification must have been issued by the notification body for the manufacturer certifying the CE marking as PPE)

Suggestions for the use of gloves:

- Must be clean gloves and they must cover the wrist well
- Must be removed immediately after completing the procedures that they were used for; in particular, great care must be taken not to touch clean surfaces with contaminated gloves;
- Must be absolutely changed if dirty or not perfectly intact;
- Glove decontamination prior to glove removal with hypochlorite [60], after every contact with different inanimate surface, and during doffing procedures;
- Must not be reused or washed.

Respiratory particles can be classified as droplets or aerosols based on the size of the particles and in particular in terms of their aerodynamic diameter. The World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) consider the transmission of the disease with particles larger than 5 microns as a transmission via droplets,

while in the case of a size of 5 microns or less as an aerosol transmission [13-15].



Diagram shows how to stop COVID -19 Transmissions

17th Century PPE Protection 21st Century PPE

<ol style="list-style-type: none"> 1. Waxed leather "Doctor's Hat" 2. Glass goggles 3. Beak, filled with dried herbs 		<p>HEAD</p> <p>EYES</p> <p>NOSE/MOUTH</p>	<ol style="list-style-type: none"> 1. Bonnet, Tyvek hood 2. Plastic goggles 3. N95 respirator mask and face-shield
<ol style="list-style-type: none"> 4. Waxed leather gloves 		<p>HANDS</p>	<ol style="list-style-type: none"> 4. Nitrile gloves
<ol style="list-style-type: none"> 5. Moroccan leather or waxed canvas suit 		<p>BODY</p>	<ol style="list-style-type: none"> 5. Gown or Tyvek suit
<ol style="list-style-type: none"> 6. Fisherman undergarb 		<p>LEGS</p>	<ol style="list-style-type: none"> 6. Leg covers
<ol style="list-style-type: none"> 7. Waxed leather boots 		<p>FEET</p>	<ol style="list-style-type: none"> 7. Boot covers

Comparison between the personal protective equipment, PPE, used by the 17th Century plague doctors and by 21st Century medical personnel.

CONCLUSION:

There is no any vaccine available for the protection of COVID-19. However, the research on the COVID-19 going swiftly all around the world. Lack of knowledge about how and whom the COVID-19 is transmitted. Our aim is to develop guide for preventative measures that are important for workplace. In this review, we mention some of the protective measures like organizational, environmental measures and personal protective measures that are important in reducing the transmission of COVID-19 disease.

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