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THE HEALTH RISKS OF PROLONGED FACE-MASKS WEARING

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Abstract: Present pandemic coronavirus disease (COVID-19) has stunned the world civilization. To the best of our knowledge, there are no vaccines or medicine against COVID-19. Under this situation, the world health organization has suggested some guidelines like maintaining social distancing, wearing face masks, hand gloves, personal protective equipment (PPE), frequently washing hand and using sanitization and even spray disinfectant in the whole body for the people across the world to protect themselves from the infection of COVID-19 pathogens named as severe acute respiratory syndrome coronavirus 2 (SARS- CoV-2). Other than following the guidelines, no options are there at this pandemic situation to date but the adversaries of conventional face mask need to bring in the notice that may cause some infectious diseases like lung-cancer, hypoxemia, and hypercapnia, and ultimate to the higher health risk because of their prolonged use. The causative factors for such infections/diseases due to prolonged use of the conventional face mask are presented in this short communication or report to benefit the society as well as mankind.

Keywords: COVID-19, Face-Mask

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The negative impact of using conventional face-mask

The wearing of face masks is one of the protection means of human respitory system from direct attack of virus, virus-like particulates, dust, poisonous gases and so on. Thereby it is suggested by the world health organization to use in on going pendamic situation across the world to reduce

the contamination rate side by side protective measures as spelt out in their guide lines. However, the advarise of prolonged use of the conventional face masks those may couse severe health hazards in the days to come and thereby those should be taken in account. Therefore knowledge of those advarsaries is of great importance for us. In this section, we have discussed about plausible negative effects of using the conventional face masks to make aware the mass people across the globe. During breathing, we emit various types of harmful substances like CO_2, N_2, O_2, and water droplets [1]. Along with exhaled particles, at the time of talking, coughing and sneezing volatile- and semi-volatile substances may carry important biomarkers such as exhaled nitric oxide [2, 3]. If anyone wears face mask then the exhaled particles cannot spread into the air rather they react between themselves and leading to HNO_3, H_2CO_3, and NO_2 , which directly infect mucous membranes and the lower and upper respiratory tracts [4-6]. Besides, prolonged use of face masks can cause bad breath that enter into the stomach and causes inflammation of the stomach, vomiting, diarrhea, gastric, diabetes, kidney failure or a liver malfunction and other serious infections in the digestive organs and ultimate to even death [7]. The local face masks made of cotton cloth or tissues are being used for the people of developing and underdeveloped countries bearing in the present pandemic COVID-19 situation bear various types of nanopores.

When these conventional local face masks are worn, various nanopores released from them during inhale and entered into the lung and stomach. The inhauled nanopores from these local conventional masks result in inflammation of the lung, cause shortness of breath and lung cancer after their prolonged use, which may ultiates to death [8]. The local conventional face masks are usually loose-fitting and thereby found to be ineffective to protect virus and virus-like particulate from their contamination. Moreover, the exhauld particles directly hit the eyes to each other due to loose-fitting of these local masks and resulting in the degeneration of cerebro-retinal [9]. The

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N95 face mask is the most common particulate filtering face piece respirator [10], which is used from protection against particulates but not against gases or vapors [11]. Although N95 masks protect the human being from external particulate it has put users at health risk for causative possible diseases. N95 mask users feel discomfort because of mask tightness and difficulty breathing [12]. N95 masks users have to suffer from severe headaches because it's use for prolonged duration [13]. Besides, prolonged wearing of N95 face-masks cause hypoxemia (an abnormally low level of oxygen in the blood), resulting in glucose breakdown and endangered lactic acid rise [13, 14]. Additionally, use of N95 face-masks causes chest discomfort, reduces the partial pressure of O_2, and increases respiratory adverse effects in End-Stage Renal Disease patients [15]. Also, N95 face-mask users suffer from hypercapnia [13,16]. Hypercapnia is also known as hypercarbia that results in CO_2 retention in the lung and leading to abnormally elevated carbon dioxide (CO_2) levels in the blood. It can also be caused by rebreathing someone's own exhaled CO_2 by wearing N95 face-masks or other tight-fitting masks [17]. Hypercapnia causes dizziness, drowsiness, fatigue, headaches, feeling disoriented, flushing of the skin, dimed sight, hearing reduction, shortness of breath, and irregularities of the heartbeat. And also show severe symptoms that include a loss of consciousness, coma, hyperventilation, twitching muscles, and seizures, among others.

Conclusion:

Prolonged use of face-mask does not play an effective role in protecting against COVID-19 but rather it causes severe diseases like lung cancer, Diarrhea, hypoxemia, and hypercapnia and ultimate to cause death. Wearing of face mask is not discouraged rather encouraged according to the guidelines of the world health organization in this pendemic situation all ove the world.

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However, some adversaries/negative effects of waring conventional face mask for prolonged duration have been highlighted in a quest of paying due attention for resolving the related issues in the days to come.

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