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## **Short Commentary**

# Immunity-Boosting Measures and Hydroxychloroquine Prophylaxis Against Fight of COVID-19

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The whole world is under the clutches of COVID-19. There has been an umpty number of cases worldwide where Health Care Workers (HCW) got infected while treating patients. Psychological issues of anxiety, depression, and fear among them are increasing. These factors compromise immunity and associated with increased susceptibility to viral upper respiratory infections [1].

As of now, there is no cure for COVID-19, and the stress has been on preventive measures to combat this. Recently, the whole world has accepted Namaste>s gesture for greeting people against handshake and hugging each other to fight against COVID-19. We are briefing here the measures to improve the immunity and chemo-prophylaxis against COVID-19 based on the present evidence. Ministry of Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homeopathy (AYUSH) have proposed some of Ayurveda's immunity-boosting measures for selfcare during the COVID-19 crisis [2].

In Ayurveda drinking warm water throughout the day is encouraged for general well being. Mandatory inclusion of some spices e.g Haldi (Turmeric), Jeera (Cumin), Dhaniya (Coriander), and Lahsun (Garlic ) in the cooking and use of herbal tea or khadha (decoction) with Tulsi (Basil), Dalchini (Cinnamon), Kalimirch (Black pepper), Shunthi (Dry Ginger) and Munakka (Raisin) in place of coffee or tea are immunity boosters. Decoction reduces depression, anxiety, and stress observed in controlled trials [3]. Also, these are a specific natural remedy for cough and respiratory problems [3]. Half teaspoon Haldi (turmeric) powder in 150 ml hot milk - once or twice a day is encouraged to boost

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the immunity. Turmeric, the primary active component curcumin has a variety of medicinal properties- anti-inflammatory, anti-oxidant, and also it decreases depression [3]. Chyavanprash is one of the oldest ayurvedic health supplements having around 50 medicinal herbs and their extracts. Amla (Indian gooseberry), the richest source of vitamin C is its prime ingredient. The various ingredients have antiallergic, bronchodilator, anti-oxidant, antiulcer, and gastro protective function [4]. Taking Chyavanprash 10gm (1tsf) in the morning is recommended.

Practicing pranayama/meditation regularly for 30 minutes a day has a positive impact on cardiovascular, respiratory functions, overall physical and mental health [5,6]. However, the government recommend that these measures to be followed along with the other general precaution. Also, immediate medical consultation to be availed as and when required. In India, ICMR, the apex body for carrying biomedical research in the country has issued guidelines for prophylactic use of Hydroxychloroquine (HCQ) for HCW [7]. Now it has released a revised advisory [8] on 22/05/2020 stating in vitro studies at the National Institute of Virology (NIV), Pune has shown log reduction in viral RNA copy of COVID-19 with HCQ. Also, retrospective case-controlled studies involving HCW in India have shown a direct dose-response relationship between the number of weeks of prophylaxis taken and the occurrence of infection. And, the risk of catching infection was also less among those who took prophylaxis. Mild adverse effects were reported as nausea (8.9%), abdominal pain (7.3%), vomiting (1.5%), hypoglycemia (1.7%), and cardiovascular effects (1.9%). There were 7 cases of serious adverse effects, of which 3 had QT prolongation on ECG [8]. A prophylactic approach using a lower dose could be considered on a global scale and administrated to vulnerable individuals with comorbidities who are at risk of severe COVID-19 [9].

ICMR recommends asymptomatic health care workers deployed in non-COVID and COVID hospital to take Tab HCQ 400mg twice a day on day 1 and then a weekly dose of 400 mg for 7 weeks [7]. Any contraindication to HCQ use should be ruled out before starting prophylaxis, Ideally, baseline ECG should be done. However, reports of multiple Randomized Controlled Trials (RCTs) on this are awaited till further conclusion. We, propose inculcation of Ayurvedic practices as described, as these have no harm but added benefits to immunity and the use of HCQ prophylaxis as preventive measures in fight against COVID-19. However, more and more clinical trials, especially RCTs are essentially required to figure out the exact benefit.

#### **Conflict of Interest**

None

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