

Digital Yoga Interventions in Social Distancing Era

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Consistent surge in number of COVID victims athrow the globe has compromised immune status and eroded mental health. The anticipated stress of contracting disease and obligatory social distancing constitute the chief threats confronted since the inception of this year. Adoption of breathing techniques and innovative healthcare strategies are imperative for management of the COVID epidemic. India's rich traditional health systems such as yoga and meditation require integration as prophylactic and therapeutic measures to downsize the burden of the COVID pandemic.

Host immunity is vital to incite the elimination of infections. Stress, fear and undesirable emotions weaken the immune system while yoga (including meditation), mindfulness, positive emotions, and relaxation, strengthen it.¹ Recurrence of viral infections, degeneration of upper respiratory tract, and delayed wound-healing time cause substantial immune response dysfunction.² Due to stress, hypothalamic–pituitary–adrenal axis (HPA) gets activated and secretes corticotrophin-releasing factor (CRF) from hypothalamus, which stimulates the secretion of adrenocorticotrophic hormone (ACTH) from pituitary. ACTH triggers the adrenal glands to produce powerful immune regulators, glucocorticoids.³ These glucocorticoids vanquish numerous stimulatory constituents of the immune cascade and mount immunosuppressive or anti-inflammatory response. Components of cellular immunity have relatively greater sensitivity to glucocorticoid suppression and tend to shift immune response from a cellular to humoral pattern during stress.⁴ Therefore, building a strong immune response is vital.⁵

The pandemic of coronavirus disease 2019 (COVID-19) infection, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), requires urgent intervention that is seamless, cost-effective and incisive. Use of digital media for yoga and meditation has been underutilized, especially when social distancing is the norm and yoga practitioners are distant from their students and patients. An effortless, accessible, reliable, digital broadcast through which scientifically proven protocols can be streamed is needed when physical training is not possible. Life-threatening diseases such as COVID not only require

continuous mind–body connection, aptly developed by yoga masters, but also a trustworthy and popular scientific platform where such services can be offered in a research-oriented manner. Yoga and meditation videos, made available as 'on-demand' broadcast, for the benefit of quarantined health workers, convalescent patients as well as normal people, can proliferate a cost mechanism intervention.

Yoga, a holistic stress management technique, is a form of complementary and alternative medicine (CAM) that produces a physiological sequence of events in the body reducing the stress response.⁶ Respiratory system health is valuable in preventing fatality as the upper respiratory tract is the entry portal for the SARS-CoV-2 virus infection. Multiple clinical trials have recommended an overall effect of yoga training towards improved pulmonary function in patients with chronic obstructive pulmonary disease.⁷ A significant decrease in the viral load of patients suffering from HIV-1 infection has been reported with an increase in the number of CD4 immune cells and improvement in their psychological states after one month of yoga practice.⁸ Yoga has also been shown to cause a decrease in the cortisol levels.⁹

Literature review signifies potency of customized asana practices, dedicated *pranayamas*, meditation, and mantras in providing a broad-spectrum immunity for viral infections, in averting viral infection and/or reducing its virulence; however, there is paucity of evidence on proficient COVID yoga protocols. An inadequate number of yoga intervention studies have been tested by using online tools, limiting the data required for scaling it for nationwide service. Recent

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COVID-specific protocols play a rejuvenating role in alleviation of COVID symptoms and improve vital capacity.¹⁰

A PGI-based interface ‘yoga scholars PGIMER’ has been relentlessly broadcasting yoga sessions on theory and practice by accomplished and certified yoga practitioners, yoga masters, academics and instructors.¹¹ A 4-minute video of very simple breathing practices was also claimed to be sent for helping patients with acute respiratory distress hospitalized for COVID-19 infection in Milano, Italy, as a pilot study by a reputed research group. So far, this has been viewed by 1,000 people between 17 March 2020 and 20 March 2020, with request for more such modules.² The therapeutic role of yoga and meditation in COVID crisis should, therefore, be extensively studied to operationalize it for public health intervention.

Continuous physical activity in the homes and maintaining a functional immune system in the current crisis are important health requirements. As yoga is instrumental in reducing stress and improving immunity, it is crucial to generate evidence for therapeutic benefits of yoga and meditation among health workers dealing directly or indirectly with COVID patients. This data can then be used to standardize and validate the yoga protocol specific to healthcare workers.

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