

## Yoga and COVID-19 Pandemic: A Review

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### Abstract:

**Background:** Corona Virus Diseases 2019 (COVID-19) is an infection that is caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2). In December 2019, the first case of COVID-19 was discovered in Wuhan, China. Since then, the virus has spread throughout the world. The COVID-19 pandemic has caused great harm to human life not only physically but also mentally, emotionally and financially. In current situation, to deal with this pandemic the hope of the whole world is on yoga, because yoga not only strengthens the physical side of the human being but also the mental, emotional, social and spiritual quanta. Yoga is gaining popularity as a non-pharmaceutical intervention for the prevention and treatment of a variety of ailments.

**Objective:** The purpose of this article is to review research of role of yoga in prevention of COVID-19 pandemic through research papers.

**Materials and Methods:** 13 studies have included in this review for the discussion. Keywords such as “Yoga and COVID-19”, “Yoga and Corona”, “Pranayama and COVID-19”, “Pranayama and Corona”, “Meditation and COVID-19”, and “Meditation” and “Corona” have been used to identify studies from Google Scholar.

**Results:** In 13 Studies, yoga shown significant reduction in stress, depression, anxiety, aggressiveness, and shown improvement in resilience, mental wellbeing, immunity, physiological fitness.

**Conclusion:** Through the numerous research papers, we conclude that different dimensions of yoga (shatkarma, asana, pranayama, meditation) are very helpful in preventing and treating COVID-19 epidemic.

**Keywords:** COVID-19, Corona, Yoga, Pranayama, Meditation, COVID-19, Corona.

### Introduction:

A The first confirmed case of the Coronavirus diseases 2019 (COVID-19) were found in the December month of 2019 in Wuhan city, China (Sharifi & Khavarian-Garmsir, 2020). The World Health Organization (WHO) declared it a Public Health Emergency of International Concern on January 30, 2020, and a pandemic on March 11, 2020. COVID-19

was given to its name after it has been announced a pandemic disease (Pande, 2020). In Term COVID-19, “CO” stands for “Corona”, “VI” stands for “Viruses” and “D” for “Disease” (Bankar, 2021). This virus is made up of a variety of proteins, lipids, and genetic material (Acter, 2020). Coronavirus disease is an infection that is caused by severe acute

respiratory syndrome coronavirus 2 (SARS-CoV-2). The majority of persons infected with the virus will have mild respiratory symptoms and recover without needing treatment. However, a few people will become sick and require medical attention. People over 65 who have medical conditions including cardiovascular disease, diabetes, chronic lung disease, or cancer are at an increased risk of acquiring chronic disease (WHO, 2020). COVID-19 has been confirmed in 318,648,834 instances worldwide as of January 14, 2022, with 5,518,343 deaths. A total of 9,283,076,642 vaccine doses have been delivered as of January 13, 2022 (WHO, 2022). There were 36,317,927 confirmed cases of COVID-19 in India from 3 January 2020 to 13 January 2022, with 485,035 deaths (WHO, 2022). The corona virus enters our body through our nose, throat or eyes. This virus spreads through contact, when an infected person coughs and sneezes or touches a surface. When the corona virus enters inside the body and comes in contact with the receptor (ACE2), then it starts multiplying automatically (Yadav & Pathak, 2020). Fever, sneeze, fatigue, loss of smell or taste, sore throat, headache, aches and pains, diarrhea, a rash on the skin or discoloration of fingers, red or irritated eyes are the most common COVID-19 symptoms, while serious symptoms include breathing difficulties, loss of speaking or flexibility, and chest pain. Precautions of COVID-19 are washing hands frequently, use an alcohol-based rub, and avoid touching face from infected hands, avoiding crowded places, staying at home, and washing hands with soap and warm water to protect yourself and others (Chakraborty, 2020). Yoga comes from the Sanskrit word “yuj”, that meaning “to join” thus yoga has been described as the union of Atma with Paramatma (Panini, Ashtadhyayi, 2011). Yoga has been performed in ancient India for thousands of years, and has an ancient apparatus for achieving physical and

mental well-being. The Yoga has use as an adjuvant therapeutic intervention began in the end of 19<sup>th</sup> century (Telles, 2013). Yoga has been practiced in India since ancient times and is increasingly being accepted as a medical practice by the Western world (Sharma, et al., 2020). Yoga refers to the state of balance with one’s own body and mind (Geeta press, 2006). Yoga has been defined as work wisdom or skillful living in the midst of activities, harmony, and moderation (BKS Iyengar, 2012). Yoga affects all aspects of human personality, physical, vital, mental, emotional, psychic and spiritual. Maharishi Patanjali has given a definite, unified and comprehensive definition of Yoga and has given the form of a Samhita to the Yoga-system, which is known as Ashtanga Yoga (Saraswati, 2006). Ashtanga yoga includes Yama (ethical rules), Niyama (purification of self), Asana (postures), Pranayama (control of breathing), Pratyahara (withdrawal of mind from sense and objects), Dharana (concentration), Dhyana (meditation) and Samadhi (absolute contemplation) (Prabhavananda, 2001). Six cleansing technique or shatkarma (Dhauti, Basti, Neti, Nauli, Trataka and Kapalbhathi) has been described in Hatha Yoga. Physiological effects of yogic cleansing techniques are already established (Sarma, et. al. 2021). Yoga is a holistic therapy approach that can help strengthen the human body’s immune system by praising willpower (Majumdar, et al., 2020). Yoga practices, including meditation, help to restore homeostasis in noncommunicable diseases by lowering stress and promoting a healthy lifestyle (Nagendra, 2020). ‘Pranayama’ introduced new breathing techniques and increased lung activity. Meditation can be used to reduce inflammation and stimulate immune factors in the human body. The term ‘meditation’ is extremely broad, and its therapeutic applications include a wide range of conditions such as pain, mental health, and somatic conditions (Khanna,

2020; Majumdar, et al., 2020; Behan, 2020). Corona patients who practiced Yoga, Meditation, and Pranayama increased immunity and lung strength, making it more difficult for the infection to infect their body (Khanna, 2020).

**Materials and Methods:** “Yoga” and “COVID-19”, “Yoga” and “Corona”, “Pranayama” and “COVID-19”, “Pranayama” and “Corona”, “Meditation” and “COVID-19”, and “Meditation” and “Corona” as a key word were used to identify the studies from search engine, Google Scholar. 13 studies have including in this review for discussion. As the inclusion criteria; studies had to be written in English, published in peer-reviewed journals. Studies were included in the review if they involved at least one asana or one pranayama or only meditation. Articles were excluded if they were reviews, surveys or editorials.

**Results:**

13 Studies had shown positive effects on physical and mental well-being due to COVID-19 epidemic and lockdown.

**Krushna, et al., (2021)** found that practicing prone asanas and slow pranayama for four weeks improved COVID-19 illness recovery, reduced psycho-physical stress and depression, and prevented the development of post-recovery complications in all patients of various ages with various pre-existing comorbidities such as asthma, diabetes, and hypertension. **Pal et al. (2020)** found that prone asanas and Pal's pranayama had acute impacts in decreasing symptom intensity and mental stress, as well as preventing complications in COVID-19 patients in the post-recovery period.

**Matiz, et al., (2020)** found that an 8-week training program including a 2-hour weekly group meeting and 30 minutes of daily meditation practice at home improved the resilience and well-being of school teachers during crucial events like the COVID-19 lockdown in Italy. **Lakshmi, (2021)** concluded that Preksha meditation, 30 minutes every day

for 10 days, significantly improved resilience and lowered aggression and stress in school children during the COVID-19 pandemic. **Priyanka and Rasanja, (2021)** concluded that higher mental health was found with the practice of yoga and meditation. Yoga and meditation activities were also linked to changes in food habits, sleeping patterns, and family relationships. As a result, yoga has played an important role in promoting mental health during the present epidemic through regular meditation and yoga practice. **Sarwal, et al., (2021)** discovered that daily practice of a specially designed Pranayama module for 28 days prevented COVID-19 infection in exposed healthcare personnel (Medical Superintendent, Chief Medical Officers, Pharmacists, Lab technician, Hospital administration staff like Managers, Supervisors). **Pal, et al., (2020)** indicated that daily practice of prone asanas and Pal's pranayama will aid early recovery and reduce COVID-19 problems, presumably by increasing oxygenation, cardiorespiratory functioning, and vagal tone, as well as lowering psychosomatic stress levels. **Shukla, et al., (2020)** revealed that a combination of anulom-vilom pranayama and diaphragmatic breathing exercise may be the greatest option for increasing pulmonary reserve and decreasing anxiety in normal people during lockdown. During COVID-19, it was effective as a preventative health activity. **Jerrin, et al., (2021)** found that a 60-minute daily Yoga and Naturopathic intervention for two weeks reduced anxiety and depression levels in COVID-19 patients, and that this intervention might be added to standard care to improve the mental and physical health of COVID-19 patients. **Raghuram, et al., (2021)** researched that Yoga had showed superior ability to cope-up with stress and anxiety related with COVID-19 and lockout. Yoga may reduce COVID-19 risk by increasing immunity and reducing stress if specialized yoga practices are followed as part of a global public health

program. **Garcia, et al., (2021)** discovered that 10 minutes of daily yoga for one month significantly reduced eye, head, neck, upper and lower back, right wrist, and hip discomfort, as well as discomfort severity, frequency, and interference for the neck, upper and lower back, and also showed significant reductions in mood disturbances in home-office workers during COVID-19. **Khadase (2021)** discovered that practicing Yogasanas and pranayama for two months helped senior persons gain physiological fitness during the COVID-19 pandemic lockdown. **Mishra, et al., (2021)** found that Integrative therapy was found to be successful in reducing the symptoms of COVID-19 in a patient with much comorbidity. Blood sugar levels have also improved significantly. Integrative therapy

based on Ayurvedic and Yoga teachings may be a viable treatment option for COVID-19 patients.

**Conclusion:** The particular review showed effectiveness of yoga, yogic exercises, pranayama, meditation, jalneti and other yogic techniques are very helpful in preventing and treating COVID-19 epidemic. Studies also shown significant reduction in psycho-physical stress, psychological stress, psychosomatic stress, depression, anxiety, aggressiveness, physical and mental discomfort, and shown improvement in resilience, mental wellbeing, oxygenation, cardiorespiratory functions, vagal tone, pulmonary reserve, immunity, physiological fitness, blood sugar levels due to COVID-19 epidemic and lockdown.

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