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## **Psychophysiological effect of yoga during Covid 19 pandemic**

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### **Abstract**

This paper discusses about the effect of yoga interventions on various components of mental and physical health during covid 19 pandemic situation. Physical exercises (asanas) may increase one's physical flexibility, coordination and strength while the breathing practices (pranayama) and meditation may calm and focus the mind to develop greater awareness and diminish anxiety. Yoga helps in reduction of distress, blood pressure, and improvement in resilience, mood and metabolic regulations so on. and thus results in higher quality of life.

**Keywords:** yoga during, Covid 19 pandemic, physical exercises

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### **Introduction**

Ammar *et al.* (2020a) have reported that COVID-19 home confinement has resulted in a decrease in all levels of physical activities and about 28% increase in daily sitting time as well as increase in unhealthy pattern of food consumption. While compulsion to stay at home for a long period of time poses a challenge to the continuity of physical fitness, the experience of hampered physical activities, restricted social communication, uncertainty, and helplessness leads to the emergence of psychological and physical health issues have found that psychological problems are occurring in adults while adjusting to the current lifestyle in accordance to the fear of contracting the COVID-19 disease. However, effective coping strategies, psychological resources, and regular physical exercise can be helpful in dealing with such health-related problems during the COVID-19 pandemic. The word “yoga” comes from a Sanskrit root “yuj” which means union, or yoke, to join, and to direct and concentrate one's attention. Yoga is a form of mind-body fitness that involves a combination of muscular activity and an internally directed mindful focus on awareness of the self, the breath, and energy. Regular practice of yoga promotes strength, endurance, flexibility and facilitates characteristics of friendliness, compassion, and greater self-control, while cultivating a sense of calmness and well-being. Yoga can provide the necessary tool for risk reduction, amelioration of stress and anxiety and strengthening of the immune function. The online platforms provide a good media for Yoga training at work places and homes.

### **Yoga benefits their health by**

- encouraging them to exercise more
- inspiring them to eat more healthfully
- improving their sleep quality
- reducing their stress levels
- motivating them to reduce alcohol use and smoking

### **Yoga and physical health benefits**

Through yoga, practitioners experience improved states of well-being, including physically, physiologically, emotionally, and

mentally (Harinath *et al.*, 2004). In the West, yoga is popularly viewed as a form of physical activity, as a way to exercise one's physical body and to release the stress of everyday life. The yoga of physical posture is referred to as Hatha Yoga (Chaline, 2000). According to Chaline (2000), Hatha yoga corrects posture; increases flexibility, muscle strength and endurance; and also promotes relaxation. Attending a Hatha yoga class often means following guided instruction in a dimly lit room, accompanied by the aroma of incense, while quiet music plays in the background. However, what visibly occurs during an instructor-led yoga class makes up only one part of the practice. People practice Hatha yoga to attain pure and total health and enlightenment.

### **Physically Assists in**

- Weight loss
- Increased muscle strength, including lung musculature

### **Physiologically Improves**

- Cardiovascular system
- Immune system
- Sleep quality and length
- Blood pressure
- Breathing control

### **Increases**

- Melatonin levels
- Natural killer cells, which fight the growth of cancer cells. Practicing yoga showed a ‘reduction in systolic, diastolic and mean arterial blood pressure1’ (p. 266). No significant change occurred in the jogging/stretching group. Yoga improved functioning in the cardiovascular system through heart rate and blood pressure reduction. The best approach to fight against the disease is prevention and management of COVID19 infection. Yoga, meditation, and yogic bio-cleansing practices previously evidenced for general immune boosting capacity, and are also evidenced for the management of respiratory disorders, non-communicable disorders such as diabetes, cardiovascular diseases, etc.

### Yoga and mental health benefits

Mental health is very important during this pandemic situation. There is a universal anxiety due to the current COVID-19 pandemic. As workplaces have been closed and businesses have been affected due to a nationwide lockdown, the general anxiety and stress exerts a significant impact on physiological changes in individuals. These physiological alterations make them more vulnerable to viral infections. Yoga is widely accepted as a potential regimen in order to address emotional and mental attributes. It relieves the mental stress and enhances immunity to a disease and can also be helpful in the current pandemic. Yoga maintains a balance in the autonomic nervous system through enhancing the parasympathetic activity and lowering the sympathetic activity else it can result in a state of depression and stress. The stress hormones (such as cortisol) which compromise the immune system, can be balanced through Yoga practice because of its inclusion of slow breathing practice which improves the lung capacity and respiratory health for optimal performance and wellness. Recent research on healthcare professionals has shown a significant improvement in personal accomplishment, depression, anxiety, stress, perceived resilience and compassion by practice of Yoga.

Some Yoga practices which are a part of the Common Yoga Protocol have been described to successfully decrease stress and anxiety levels, and have presented other benefits as well. These practices include: Anulom Vilom Pranayama (alternate nostril breathing), Bhramhari Pranayama and meditation. Practices like Kapalbhathi (forceful exhalation by contracting the abdominal muscles) have been found useful to purify the frontal air sinuses and also aid to overcome cough disorders which maintains the health of respiratory tract and boosts immunity. Along with the above-mentioned Yoga practices, certain Asanas, if practiced under supervision, have also been shown to relieve stress. This includes Sasankasana (hare posture), Bhujangasana (cobra posture), Makrasana (crocodile posture) and Setubandhasana (bridge posture). Yoga practice can reduce the risks of comorbid conditions and strengthen the immune system by relieving stress and anxiety or directly improving immune markers or both.

### Psychologically Decreases

- Depression
- Anxiety
- Stress

### Emotionally Aids in

- Control over negative thoughts
- Increased positive affect
- Management of difficult situations
- Healthy expression of negative emotions.

### Yoga for Hormonal imbalance

Hormonal balance is key to improving immunity. A person with strong immunity has greater success in fighting the COVID-19 infection. Practicing yoga is best suited during the pandemic because it manages physical and mental issue. When we're talking about hormonal imbalances, stress management is a good place to start. This yoga sequence will calm your nervous system and detox your organs. Regular practice of yoga may restore and maintain general endocrinological properties in the human body. Human growth hormone (GH) secreted from anterior pituitary

has important roles in growth of almost all tissues, metabolism, and changes in body composition. Dehydroepiandrosterone sulfate (DHEAS), secreted by the adrenal cortex, acts in the human body as a neurosteroid, cardioprotective, antidiabetic, antiobesity, and immunoenhancing agent. Our hormones are core to how healthy we are. The hormones help our body function, from carrying energy, maintaining metabolism, mood, digestion, growth, and reproductive functions. Any imbalances or dysfunction can show up in the form of various health issues, including obesity, PCOS, and thyroid disorders. A lot many hormonal issues are a result of the lifestyle we lead as well. Yoga is the solution to all hormonal imbalances. It can cure internal and external health issues our body has with the help of few asanas and a routine. Performing yoga could achieve greater success in fighting the novel coronavirus as it boosts the immune system. The endocrine system is made up of a collection of hormone-producing glands. The hormones produced are essential to carry out practically every function in the body, ranging from maintenance of energy levels, metabolism, sexual function, mood, growth and development. When there's a hormonal imbalance, you could develop a wide variety of symptoms — including headaches, skin problems, insomnia, fatigue, sudden weight gain or weight loss, and muscle loss. We can choose yoga poses that impact specific glands, it is also important to do the kind of yoga practice that helps to keep the entire system balanced.

### 5 yoga asanas to regulate hormones and enjoy good health

1. Bhujangasana or cobra pose
2. Setubandhasana or bridge pose
3. Malasana or garland Pose
4. Sasangasana or rabbit pose
5. Ustrasana or camel pose

### Conclusion

Generally, yoga is a safe way to increase physical activity and mental health. Due to social distancing norms, the availability of Yoga trainers has become restricted. Yoga practice is actively sought to achieve reduced anxiety and stress so that improved sleep may positively impact immunity. As a consequence, there is a spurt in social media, catering to daily online Yoga sessions which apparently prove useful in providing accessible means to achieve mental as well as physical well-being. The online platforms provide a good media for Yoga training at work places and homes.

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