

MINUTES OF AN INTERNATIONAL WEEKLY MEETING HELD BY HCFI DR KK AGGARWAL RESEARCH FUND



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Yoga As an Adjuvant Therapy for Bronchial Asthma

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9.30-10.30 am

- Lungs are the vital organs of the body. They have an anatomical area of 100 sq m. About 10,000 L of air passes in and out of lungs every day and the same amount of blood also passes through every 24 hours. 350 liters of oxygen is delivered every day. So, the most important functions of the lungs are ventilation, perfusion and oxygenation of the body.
- Asthma is a heterogenous disease usually characterized by chronic airway inflammation. It is defined by the history of respiratory symptoms such as wheeze, shortness of breath, chest tightness and cough that vary over time and in intensity, along with variable expiratory airflow limitation.
- ABC of asthma: Airway hyperresponsiveness, bronchoconstriction and chronic inflammation.
- The underlying cause of asthma is the chronic inflammation.
- The Asia Pacific - Asthma Insights and Management (AP-AIM) Study has described trigger factors for asthma. While pollution and dust (49%) are the most common triggers in the Indian asthmatic population, it is important to note that stress is also reported as a trigger factors in 11%. Emotional swings can also trigger asthma.
- GINA (Global Initiative for Asthma) recommends step-wise pharmacological treatment for asthma. Treatment can be adjusted up and down depending on the individual needs of the patient.
- There has been a lack of emphasis on nonpharmacological management of asthma.
- Treatment of modifiable risk factors is important. Individually tailored risk factor has to be identified. A detailed history is very important for asthma management. Mental health assessment is also important.
- Yoga and pranayama work very well as adjuvant for smoking cessation, for obesity and to deal with major psychological problems.
- Nonpharmacological therapies as per GINA include cessation of smoking, physical activity, healthy diet, weight reduction, breathing exercises and avoidance of occupational exposures.
- Shiva, also known as Adiyogi, is the Founder of yoga in the universe, Maharishi Hiranyagarbha is the Founder of yoga on earth.
- Maharishi Patanjali is the Father of Modern Yoga. He was the compiler of 196 Yoga Sutras.
- The International Day of Yoga is celebrated globally on 21st June every year.
- The Sanskrit word yoga is derived from the verb root "yuj", which means to link or connect. Yoga means to join together the mind, body and spirit. It is an antidote for stress.
- The aim of yoga for health is to bring balance into the body physically, mentally and emotionally. By connecting to ourselves through breath, we can bring our bodies from a state of disease to a place of health.
- There are 8 steps of yoga: Yam, Niyama for social health; Asana, Pranayama are for physical health; Pratyahara, Dharana for mental health and Dhyana, Samadhi are for spiritual health.
- Many studies on the powers of yoga in improving asthma have been conducted in the past. The types

of evidences for this include personal/patients' experiences, uncontrolled subjective assessment and measurements, controlled trials and double-blind placebo-controlled trials.

- ⊖ A controlled trial published in the BMJ in 1985 by Nagarathna et al found a significant greater improvement in weekly number of attacks of asthma, scores for drug treatment and peak flow rate with yoga.
- ⊖ Studies in Journal of Asthma (1987), American Review of Respiratory Disease (1990), American Journal of Respiratory Diseases (1983), International Journal of Yoga (2020), Journal of Alternative and Complementary Medicine (2012), Complementary Therapies in Clinical Practice (2021), have demonstrated beneficial effects of yoga in asthma patients.
- ⊖ No study has suggested that yoga should replace pharmacological treatment. Yoga should be used as an adjuvant to pharmacological treatment.
- ⊖ The 1990 Lancet study on effect of yoga breathing exercises (pranayama) on airway reactivity in patients with asthma was referred to for the first time by the British Thoracic Society guidelines for asthma published in 1998.
- ⊖ GINA also for the first time commented on the role of yoga in asthma in 2002.
- ⊖ A study published in February 2021 concluded that yoga appears to have a significant effect on control of asthma as measured by PFT and quality-of-life and recommended yoga therapy as an adjuvant in asthma management along with standard pharmacological therapy.
- ⊖ A Cochrane Review in 2016 said that there is a small amount of evidence indicating that yoga can reduce use of medications.
- ⊖ The NAMASTE (Novel Activity Management in severe Asthma-Tailored Exercise) trial, reported in BMC Pulmonary Medicine in 2021, concluded that a yoga and mindfulness intervention was feasible; it was also accepted by patients and improved their HRQoL.
- ⊖ A randomized controlled trial was done in KGMU in collaboration with Lucknow University, which compared standard medical treatment + yoga intervention for 30 minutes against standard medical treatment alone. The biochemical profile, antioxidant status, symptom scores, spirometric indices, inhaled medications and QoL were assessed in 241 patients. A significant improvement in biochemical profile, significant decrease in asthma symptom scores;

significant improvement in the spirometric variables; nearly 55% reduction in use of rescue inhaled medication and improved QoL was noted in the Yoga group.

- ⊖ Yoga tries to cure asthma by cleaning the lungs and making the patient internally strong so that the patient does not react to stressful situations.
- ⊖ Pranayama and asanas restore the health of the lungs and the respiratory system.
- ⊖ Yoga not only clears the lungs, but also gives the willpower to give up smoking through meditation.
- ⊖ By strengthening immune system, they also reduce dependency on medication.
- ⊖ Regular practice of yoga can improve asthma symptom score.
- ⊖ Yoga can be very helpful in increasing compliance and adherence to therapy.
- ⊖ Pranayama or deep breathing opens up the collapsed alveoli, increases the oxygen carrying capacity, clears the airway of mucus/pollutants, increases the stamina of respiratory muscles and enhances ventilatory power.
- ⊖ Diet also has an important role in asthma management.
- ⊖ Unlike physiotherapy, yoga is always correlated with breathing pattern.
- ⊖ Flexion should correlate with expiration and extension with inspiration.

COUNTRY UPDATES

- ⊖ **India Update:** There is a gradual increase in the number of cases in India particularly in two states Maharashtra and Delhi, which had almost given up covid appropriate behavior including mask wearing. Now these rules are back, but the numbers are still increasing. Yesterday, there were 3,344 cases, active cases are 17,801, recovery rate is 98.7%, positivity rate is 0.71. The situation is under control. About 1 crore 88,000 people have been vaccinated. Vaccination of children is being debated though the vaccine is not finalized yet. Studies show that there may not be a fourth wave.
- ⊖ **South Africa Update:** It is difficult to say if there is a fifth wave. The surge is most probably due to BA.4 and BA.5. The festivities have just got over and lot of restrictions have been relaxed, so people are going out. But the situation is being closely monitored to see if the new wave will be driven by a variant. But the patients are not much sick and many patients have otitis media and rhinopharyngitis.

- **Pakistan Update:** Life is going back to normal. People do not wear masks despite the fact that they are required in closed spaces. There has been no death in the last week. The vaccination program is still going on but there is no much rush at the centers. The 3rd and 4th boosters are going on and are being provided free of cost by the government.
- **Singapore Update:** The situation is overall stable. Yesterday, there were 2,700 cases; 23 needed oxygen and six were in ICU. Dengue is more of a concern right now. Masking in closed spaces is required but not outside. Group sizing and social distancing have been relaxed. Two cases of BA2.12.1 have been detected.

PARTICIPANTS

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