



## **Role of Yoga in the Prevention of Non-Communicable Diseases**

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### **ABSTRACT**

Yoga emphasises physical and mental wellness as a continuous spectrum of human nature, not just a static entity state to be achieved and preserved. It is considered a complementary alternative medicine that improves neuro-effector connection, increases strength, and promotes the proper functioning of all organ systems. Clinical studies have shown that the therapeutic techniques of yoga are effective in treating many non-communicable diseases, including asthma, hypertension, heart disease, and diabetes. Yoga exercises improve physical strength, flexibility, and cardiovascular and respiratory health. Research studies suggest that emphasis should be on optimising nutrition, early-life interventions, and reducing harmful exposures to curtail the rising burden of NCDs. It is generally considered a low-cost solution to manage multiple lifestyle conditions. Identifying yoga's preventive and therapeutic benefits with an evidence-based inclusion of yoga is essential in daily clinical practice. Henceforth, further research studies will help integrate yoga into public education, training, and disease management.

**Keywords:** Yoga, public health, non-communicable diseases, physical activity, prevention, management

## **INTRODUCTION**

Yoga as a kind of treatment (yoga chikitsa) has gained enormous popularity. Numerous research and systematic reviews prove its effectiveness and potential for treating various psychosomatic disorders. It emphasises physical and mental wellness as a continuous spectrum of human nature, not just a static entity state to be achieved and preserved. Yoga benefits the person by creating "sukha sthanam," a dynamic perception of spiritual, physical, and mental health.<sup>1</sup>

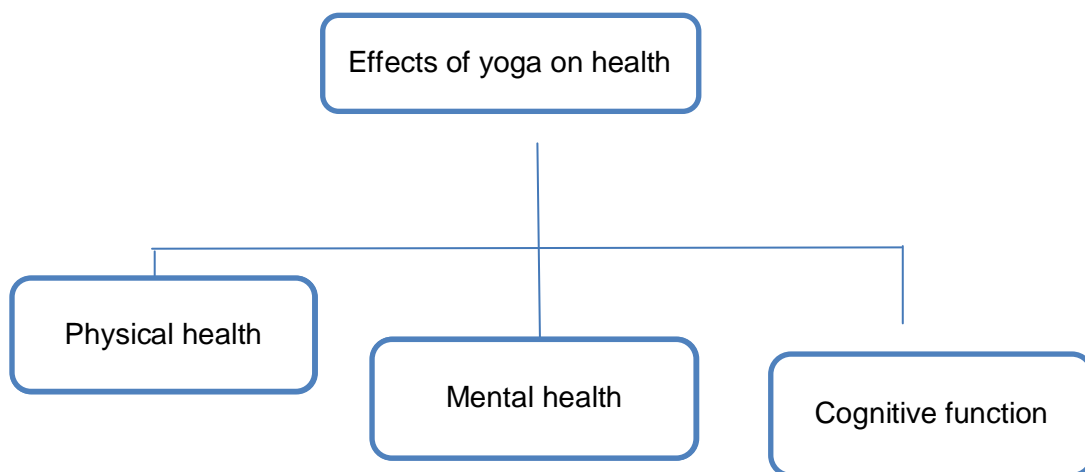
According to the Global Action Plan on Physical Activity (2018-2030), yoga practice is a valuable tool to make physical activity an essential part of life and promote good health.<sup>2</sup> Yoga is a form of mind-body therapy that integrates a person's mental, physical, and spiritual elements to improve various health aspects. It enhances physical health through movements (asanas), bodily postures, and breathing techniques. The weekly time spent practising yoga, the duration, and the methodology influences the benefits of yoga practice.<sup>10</sup> Yoga is considered a complementary alternative medicine that improves neuro-effector connection, increases strength, and promotes the appropriate functioning of every body part. Moreover, it boosts resistance to diseases and stress, resulting in calmness, balance, a positive outlook, and serenity. Evidence shows that stress causes chronic illnesses and ailments such as cancer, heart disease, and stroke. To gain yogic integration at different levels of our well-being, we must consider the multi-dimensional aspects of yoga. A well-balanced diet, a positive environment, a spiritual lifestyle, an adequate body workout through asanas and a healthy thought process is essential to accelerate self-healing capacity.<sup>3</sup>

Non-communicable diseases, or NCDs, are chronic diseases that have long-term consequences on an individual's health and quality of life. Furthermore, some illnesses develop gradually and do not exhibit symptoms in the early stages. NCDs are a combination of physiological, behavioural, genetic, and environmental factors and encompass a variety of ailments. Non-communicable diseases (NCDs) lead to 71% of all yearly global fatalities. Globally, 17.9 million NCD deaths are related to cardiovascular disease, 9.0 million to cancer, 3.9 million to respiratory illnesses, and 1.6 million to diabetes.<sup>4</sup>

Furthermore, the diseases contribute to over 80% of all NCD-related mortality. Modifiable risk factors for non-communicable illnesses include tobacco use, sedentary lifestyles, alcohol intake, and poor dietary habits. National Programme for Prevention & Control of Non-Communicable Diseases (NP-NCD) services incorporate Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homoeopathy (AYUSH) facilities and methodologies, with yoga practice serving as an essential component of the intervention. Several studies over the last

few decades have shown that yoga is vital in reducing stress.<sup>4</sup> It establishes the groundwork for scientific knowledge that yoga can reduce or even prevent stress-related disorders. Exactly how yoga brings about visible transformations is still unclear, but several studies suggest that endocrine, neurological, cellular, immune, and genetic systems work together.<sup>5</sup> Clinical studies have shown that the therapeutic techniques of yoga are effective in treating many non-communicable diseases, including asthma, hypertension, heart disease, and diabetes. Yoga exercises improve physical strength, flexibility, and cardiovascular and respiratory health. It promotes cell function by allowing more oxygen to reach them by increasing blood flow, haemoglobin levels, and red blood cell production. Yoga therapy thins the blood, which lowers the chance of a heart attack or stroke. Furthermore, it reduces systolic blood pressure, diastolic blood pressure, mean arterial pressure, and orthostatic tolerance considerably. Yoga increases fitness and lowers exhaustion by revitalising physical and mental energies.<sup>6</sup>

Furthermore, yoga is also effective in addressing acute stress, such as post-traumatic stress disorder or chronic stress in people with depression or anxiety.<sup>6</sup> Besides its effects on stress reduction and mood disorders, yoga also aids in treating and rehabilitating addiction and depressive symptoms and enhances sleep. It has been proven effective in improving attention, concentration, learning abilities, and memory, indicative of enhanced cognitive functions.<sup>10</sup> Hence, it is evident that yoga is efficacious in improving cardiorespiratory function, psychological profile, plasma melatonin levels, body homeostasis, autonomic balance, and overall well-being.



**Figure 1:** Author's creation

Evidence suggests that considerably more emphasis should be on early-life treatments, optimising nutrition, and minimising hazardous exposures to reduce the rising prevalence of NCDs.<sup>8</sup> The Indian government has been making persistent efforts over the past few years to popularise yoga and make it a part of everyone's lifestyle. For instance, The National Council for Teacher Education (NCTE) has made yoga a required topic in schools so that its advantages can be deeply rooted in the young minds of students.<sup>9</sup> Through telemedicine and application-based services, technology has significantly aided in delivering and disseminating yoga therapy. Yoga-related apps are widely available and may be used for free, making it possible for anyone to start practising yoga anytime. Yoga has also been recognised by the International Non-Olympic Committee and the Ministry of Youth Affairs and Sports as a Non-Olympic Sports discipline, owing to its significance in daily life.<sup>10</sup>

## **CONCLUSION**

Yoga offers numerous health benefits, including increasing physical fitness, relaxation, and self-awareness. It is generally considered a low-cost solution to manage multiple lifestyle conditions. Identifying yoga's preventive and therapeutic benefits with an evidence-based inclusion of yoga is essential in daily clinical practice. Henceforth, further research studies will help integrate yoga into public education, training, and disease management. In conclusion, yoga therapy's holistic approach aims to completely integrate an individual's treatment or management at all levels of being. Therefore, it is the most effective strategy for achieving multidimensionally optimal health. Yoga can be accepted as a way of life to achieve the ideal, harmonious state of the mind and body.

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