

## YOGA IN MODERN WORLD

### Abstract

The term 'Yoga' is derived from the Sanskrit word 'Yuj' meaning control or unite. Originally yoga was practice for spiritual upliftment but however, practice of yoga is found to have several changes in the normal body physiology. These yogic techniques which aim at physical and mental self culture, have been shown to have convincing scientific basis and to produce consistent physiological changes. . It is reported that the practice of yoga stabilizes the autonomic nervous system with a tilt towards parasympathetic nervous system resulting in decrease heart rate and blood pressure. Yoga is especially helpful in the management of stress related disorders including diabetes mellitus, obesity, bronchial asthma, rheumatoid arthritis, cancer, psychiatric disorders, post traumatic stress disorders, etc. Fusion of ancient healing practice of yoga and modern medical science can improve quality of life and life expectancy by promoting positive health and mind. Yoga practice has several application in rehabilitation. With the advent of Ayush ministry in India, yoga has found a new place in the health related sectors as well as in the economy. Nowadays there is a great career scope of yoga not only in India but also in abroad due to increase adoption of yoga on the global platform. Modern lifestyle induced stress and competitive world has resulted in increasing popularity of health consciousness and a sharp increase in the acceptance of yoga around the world.

**Keywords:** yoga, autonomic nervous system, blood pressure, stress

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## I. INTRODUCTION

The term “Yoga” is derived from the Sanskrit word “Yuj” meaning control or unites [1]. Originally yoga was practice for spiritual upliftment but however, practice of yoga is found to have several changes in the normal body physiology. And as a result many studies have been conducted to document these physiological changes after yoga practices.

Yogic discipline can be described under four broad groups-technique of bodily health, technique of controlling breath, behavioural discipline and mental concentration. These yogic techniques which aim at physical and mental self culture, have been shown to have convincing scientific basis and to produce consistent physiological changes.

Every modern man experiences stress because of highly competitive and challenging lifestyle. Stress is a non specific response caused by various stressors, Stress distorts the basic neuro-endocrine mechanism and stimulate limbic system and hypothalamus which control the autonomic nervous system. When this system is stimulated, there is increase in heart rate and blood pressure.

The harmful effect of these stresses in the body system can be minimised by enhancing the adaptive body mechanism to bring back to the equilibrium. By giving rest to our body and mind, yoga practices can shake off many psychosocial related disorders.

## II. BACKGROUND HISTORY

One of the world oldest science, Yoga, is originated in India. According to Indian mythology, Lord Shiva was the first one to impart the knowledge of yoga. The main sources providing information about yoga and its literatures are available in the Vedas, Upanishads, teaching of Buddha, the Puranas, etc. Bhagawad Gita also provide detail concept of yoga. The formalised form of yoga as it is found today was propounded by Patanjali, some 300 years B.C. Patanjali’s Yoga Sutras, besides focussing on various aspects of yoga, is identified with the eight fold path of yoga. The post classical period stretches from 800 A.D to 1700 A.D where the contribution of a Adi Shankaracharya and Ramanuja were prominent. In the mid nineteenth century, yoga was introduced to the western world through the work of Swami Vivekananda. Shri Yogendraji contribute a vital role in demystifying the yoga and making it accessible to the millions of people.

## III. YOGA IN HEALTH AND DISEASE

**1. Health benefits of yoga:** By balancing the body system, yoga brings the body and mind into a state of mental clarity and a better sense of well being. They act at the level of neuro-hormonal mechanism. It is reported that the practice of yoga stabilizes the autonomic nervous system with a tilt towards parasympathetic nervous system resulting in decrease heart rate and blood pressure [2]. There is also report of decrease respiratory rate, metabolic rate, improvement of excretory and digestive functions [3].

The electroencephalogram (EEG) recording of yoga practitioners indicate a relax state of mind with better concentration. There is improvement of intellectual functions

like memory, personality, learning and moral. Yoga also results in a state of reduced stress and fatigue which ultimately help in developing a state of well being [4,5].

There is also improvement in the pulmonary function by increasing lung volumes and capacities and breath holding time. These improvements are due to increase efficacy of respiratory muscles due to regular practice of yoga breathing technique of pranayama [6].

As a result of neuro-hormonal changes, yoga practitioners are found to have increased level of thyroxine, prolactin, oxytocin while serum testosterone, luteinizing hormone, blood glucose and sodium level decreases. There is improvement in the lipid profile study. The resting glucocorticoids level decreases while in acute challenging situation, its secretion increases showing the improved ability of the body to cope up with stressful situation.

Due to regular practice of body posture (asanas), there is increase flexibility of musculo-skeletal system and joint movement. This leads to increase strength, endurance and energy level thereby improving overall work performance.

- 2. Therapeutic application of yoga:** Yoga is especially helpful in the management of stress related disorders. Some of the disorders in which yoga is reported to have effective role in their management include diabetes mellitus, obesity, bronchial asthma, rheumatoid arthritis, cancer, psychiatric disorders, post traumatic stress disorders, etc. Yoga has found an important place in disease prevention especially to the vulnerable and elderly people whose immune function is compromised and having unhealthy lifestyle.

Fusion of ancient healing practice of yoga and modern medical science can improve quality of life and life expectancy by promoting positive health and mind. There are various studies showing the benefits of yoga for diabetes mellitus (type 2). Studies report significant decrease in blood glucose, oxidative stress markers and improved lipid profile. After intensive yoga course, there is report of decrease of body mass index, waist and hip circumferences, improved posture and stability and muscle strength. Yoga is found to be very effective in chronic disease like rheumatoid arthritis. It is shown in studies that the rheumatoid factor level decreases along with decrease in pain in yoga practising rheumatoid arthritis patients. There is also less episodes of angina pain in coronary artery disease.

In cancer patients, restorative yoga, a gentle form of yoga, is used to help in achieving reduced depression and anxiety. It also helps to deal with the treatment related toxicity of cancer therapy.

There is improvement of mood, self esteem and T-cell counts in human immunodeficiency virus (HIV) positive individuals after yoga sessions. Yoga is also used as an adjunct therapy in managing psychiatric disorders.

- 3. Yoga and rehabilitation:** Yoga practice has several applications in rehabilitation (some are scientifically proven) of disorders like physically challenged person, mentally

challenged person, substance addiction, HIV positive person, post traumatic stress disorder, etc.

Loosening exercise (asanas) helps to reduce pain and disability in physically challenged persons. Mentally challenged children show better motor co-ordination, mental ability and social adjustment after yoga sessions. Practice of meditation are found to reduce addictive behaviour in substance addiction.

Post traumatic stress disorder is one of the major problems nowadays. As yoga is proved to be effective in coping up stressful situation by increasing dominance of parasympathetic system activity thereby enhancing relaxation.

#### **IV. FUTURE OF YOGA**

With the advent of Ayush ministry in India, yoga has found a new place in the health related sectors as well as in the economy. Yoga is being adopted in the various health sectors including rehabilitation centres. It is also now taken up by the sports institute, fashion institute and even by recreational institutes. In the western world, yoga is adopted mainly as a weight loss or exercise programmes.

#### **V. YOGA AS A CAREER**

Nowadays there is a great career scope of yoga not only in India but also in abroad due to increase adoption of yoga on the global platform ( in various form of wellness centres). Professional who shares the knowledge of yoga and meditation are called yoga teachers or yogis or yoga instructors.

There is a potential to cause musculo-skeletal injury while performing yoga practices especially in a physically and weak or unfit person. So, it is always advisable for first time yoga practitioner to practice yoga under an expert guidance of a yoga teacher.

Fitness is the call of today's modern world for which there is always a need of a yoga teacher and many courses are available nowadays. After pursuing these courses, one can work in wellness or fitness associated centres or even may become a visiting yoga instructor.

#### **VI. CONCLUSION**

Yoga, now, has become more than an ancient spiritual practice and come up as a form of exercise that has gain significant popularity in the last few years all over the world. Therapeutic effect of yoga is limited as it cannot treat a case which require surgery, for example, appendicitis or a case of acute medical condition. But it is found to be more effective as an adjunct therapy to the treatment of conventional medical methods, especially in chronic diseases and stress related disorders. And modern lifestyle induced stress and competitive world has resulted in increasing popularity of health consciousness and a sharp increase in the acceptance of yoga around the world. This acceptance is because of the recognition and realisation of the beneficial changes in the bodily functions after yoga practices.

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