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Role of yogic exercise on body composition: An overview

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Abstract

Due to the rise in popularity of holistic approaches to health and wellbeing, the function of yoga practice in affecting body composition has received a lot of attention lately. Body composition is a key determinant of general health and fitness and refers to the ratios of fat, muscle, bone, and other tissues that make up the human body. Through a thorough analysis of the available studies and literature, this overview seeks to shed light on the effects of yoga practice on body composition. Yoga exercise, which consists of asanas (physical postures), pranayama (breath control), and meditation, has been reported to help reduce body fat percentage and increase muscular mass, bone density, and overall body weight. According to studies, regularly doing yoga can help people lose body fat, especially those who are overweight or obese. Additionally, some yoga postures with resistance and strength components have the ability to encourage muscle growth and improve physical strength.

Keywords: Yoga, yogic exercises, body composition, disease

Introduction

Yoga is a holistic discipline that has been practiced for thousands of years and has its roots in ancient India. It includes a wide range of activities that are physical, mental, and spiritual that are intended to enhance wellbeing and self-awareness (D. Kumar, Dhull, *et al.*, 2023; NARA *et al.*, n.d.; Sagre *et al.*, 2022) [22, 26]. The Sanskrit word "yuj," which meaning to join or merge, is whence the English term "yoga" is originated McCall, M. C. (2013) [1]. It represents the unity of the mind, body, and spirit. Numerous postures (asanas), breathing exercises (pranayama), meditation, and moral guidelines are frequently incorporated within a yoga practise. Over time, various yoga practises have developed, with each emphasising a particular facet of the practice (Deepak *et al.*, 2022; D. Kumar, Nara, *et al.*, 2023; D. Kumar & Dhull, 2023; NARA *et al.*, 2022; Nara, Kumar, Rathee, & Kumar, 2022) [18, 22, 23, 27, 28]. Several well-liked types include Hath yoga, Vinyasa yoga, Bikram yoga, Ashtanga yoga, Kndalini yoga, Mantra yoga. Yoga was originally created as a way to achieve spiritual enlightenment and self-realization. It has developed into a popular discipline with several advantages for both physical and mental health over time Pal, A., Srivastava, N., Tiwari, S., Verma, N. S., Narain, V. S., Agrawal, G. G., & Kumar, K. (2011) [2]. Yoga is adaptable because it can accommodate people of diverse ages, socioeconomic backgrounds, and fitness levels, making it available to people from all walks of life. Yoga is a whole lifestyle that promotes a greater awareness of oneself and the world around us, not just a physical exercise regimen Bera, T. K., & Rajapurkar, M. V. (1993) [6]. It teaches us to live in the present, let go of attachments and expectations, and accept and be grateful for everything in life (Dhull, 2018; D. Kumar, Dhull, *et al.*, 2023; S. Kumar *et al.*, n.d.; Nara, Kumar, Rathee, & Phogat, 2022; Parveen, 2018) [20, 22, 29, 30]. Yoga has become extremely popular as a way to find solace and lessen the stresses of daily living in today's fast-paced and demanding society Bhardwaj, P. R., & Bhardwaj, A. K. (2015) [3] (Dhull, n.d.; Kasnia & Dhull, 2022) [21]. Beyond the physical, its numerous advantages also include cerebral clarity, emotional stability, and a general sense of contentment Seo, D. Y., Lee, S., Figueroa, A., Kim, H. K., Baek, Y. H., Kwak, Y. S.,.... & Han, J. (2012) [8] (Sagre *et al.*, 2022) [31].

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Modern science and medicine have also embraced the practice of yoga, with several studies attesting to its beneficial effects on a range of medical ailments, including anxiety, depression, hypertension, and chronic pain Krishnamoorthi, K., Kumaran, S., & Halik, A. (2021) ^[7]. Yoga has consequently become a crucial component of complementary and alternative medicine. In this introduction to yoga, we'll explore the various forms and facets of this age-old discipline and examine its deep influences on the body, mind, and soul (Deepak *et al.*, 2022; D. Kumar, Nara, *et al.*, 2023; D. Kumar & Dhull, 2023) ^[18, 24, 23]. We will examine how yoga has changed and adapted to meet the demands of a diverse and dynamic world, from its spiritual foundations to its contemporary applications Dimauro, I., Grazioli, E., Antinozzi, C., Duranti, G., Arminio, A., Mancini, A.,... & Di Luigi, L. (2021) ^[4]. The philosophy and spirituality of India had a significant influence on the history of yoga. The Vedas, which are prehistoric writings from more than 4,000 years ago, include the earliest documentation of yogic practices Aladro-Gonzalvo, A. R., Machado-Díaz, M., Moncada-Jiménez, J., Hernández-Elizondo, J., & Araya-Vargas, G. (2012) ^[8]. However, yoga wasn't formally arranged into a philosophical framework until Patanjali's "Yoga Sutras" were assembled in the year 400 CE. In the years that followed, other schools of yoga developed, each emphasizing unique facets of the discipline. The primary focuses of Bhakti, Karma, Jnana, and Raja yoga were devotion and love, selfless service, knowledge, and wisdom Elavsky, S., & McAuley, E. (2007) ^[9]. The Modern Yoga Revival: Prior to Indian yogis spreading the practice to the West in the late 19th and early 20th centuries, yoga was primarily practiced in India. The World's Parliament of Religions in Chicago in 1893 was where Swami Vivekananda delivered his address, which was a turning point in the introduction of yoga to the West. Numerous well-known yoga masters, such as Swami Sivananda, B.K.S. Iyengar, Pattabhi Jois, and Swami Vishnudevananda, popularised various yoga forms all over the world throughout the 20th century Ha, M. S., Baek, Y. H., Kim, J. W., & Kim, D. Y. (2015) ^[10]. Yoga is now available to a worldwide audience because to their modifications and adaptations of traditional practices to fit modern lifestyles. Modern Yoga Applications: Yoga has developed outside of its traditional spiritual framework in modern culture. It is now a well-liked form of exercise, stress reduction, and mindfulness. There are numerous yoga styles that can accommodate different requirements and tastes, including Vinyasa, Bikram, Iyengar, and Yin. The health advantages of yoga have also been confirmed by scientific investigations. Regular practice has been linked to increased balance, flexibility, and strength as well as reduced stress and greater overall health Chaya, M. S., Ramakrishnan, G., Shastry, S., Kishore, R. P., Nagendra, H., Nagarathna, R.,... & Kurpad, A. V. (2008) ^[11]. The development of yoga from an ancient philosophy to a current, widespread movement has been transformational. Millions of people all around the world are still inspired by its remarkable effects on physical, mental, and spiritual wellbeing. Yoga offers a thorough route to peace and self-discovery, whether it is practiced for spiritual development, physical fitness, or mental clarity Fan, J. T., & Chen, K. M. (2011) ^[12]. As we enlarge our understanding of yoga, we find that it is a timeless practice that speaks to the various and changing needs of humanity Tracy, B. L., & Hart, C. E. (2013) ^[15]. The proportional proportions of the various tissues that make up the human body are referred to as body composition. It offers useful insights on the distribution of components like water,

fat, muscle, and bone, which are crucial for evaluating general health and physical performance Lee, J. S., & Kang, S. J. (2016) ^[13]. Human composition takes into account the qualitative differences between various human tissues while body weight is a straightforward indicator of total mass. Understanding body composition is important because it provides a more thorough assessment of a person's health status than more basic measurements like body mass index (BMI) do Jakhotia, K. A., Shimpi, A. P., Rairikar, S. A., Mhendale, P., Hatekar, R., Shyam, A., & Sancheti, P. K. (2015) ^[14]. It gives a clearer picture of how weight is made up and can assist distinguish between someone with a healthy body composition and someone who could have an unhealthily uneven distribution of tissues.

Materials and methods

Ancient yoga forms: The foundation of the varied and all-encompassing practice of yoga that exists now is found in ancient yoga traditions. The foundation for the numerous pathways and styles of yoga that have grown over time was provided by these forms, which were created in India thousands of years ago. Here, we examine some of the important prehistoric yoga forms.

Types of yoga

Hatha Yoga: One of the earliest and most well-known ancient yoga forms is Hatha Yoga. "Hatha" is a compound word made up of the Sanskrit terms "Ha" (which means sun) and "Tha" (which means moon). Hatha Yoga uses physical poses (asanas) and breath management (pranayama) to balance the body's opposing energies, represented by the sun and moon. In addition to emphasizing the fusion of the mind and body, the practice of Hatha Yoga places an emphasis on developing strength, flexibility, and balance.

Jnana Yoga: The road to knowledge and wisdom is called Jnana Yoga. In order to understand one's actual nature and reach spiritual enlightenment, it places a strong emphasis on introspection and meditation. Jnana Yoga practitioners want to transcend the boundaries of the mind and ego in order to comprehend the eternal truths. To distinguish between the real self (Atman) and the false self (ego), practitioners of this ancient type of yoga engage in introspective practices, contemplation of philosophical ideas, and study of sacred scriptures.

Bhakti yoga: The yoga of love and devotion is known as bhakti yoga. It is a way that inspires followers to develop unwavering love and devotion for the divine, whether it takes the form of a personal deity, the natural world, or the cosmos. Bhakti Yogis demonstrate their devotion by offering prayers, bhajans (hymns), and seva (selfless service). The Bhakti Yoga method encourages letting go of the ego and forging a strong bond with God.

Karma yoga: The way of selfless activity and service is known as karma yoga. It places a focus on carrying out one's obligations and duties without connection to the results or benefits. Karma Yoga practitioners strive to live according to dharma (righteousness) and make beneficial contributions to the world without seeking personal benefit. Selfless activities help people to purify their minds, develop a sense of detachment, and evolve spiritually.

Raja yoga: Raja Yoga, often known as "royal yoga" or

"classical yoga," is a traditional yoga practice that emphasizes mental control and mastery. The wise man Patanjali methodically outlined the Raja Yoga philosophy in his book "Yoga Sutras." This style of yoga has eight limbs (Ashtanga), which include breathing exercises (pranayama), meditation (dhyana), and moral guidelines (yamas and niyamas). Raja Yoga seeks to achieve inner tranquilly and self-realization by calming the mind's oscillations (chitta vrittis).

Kundalini yoga: The dormant spiritual force (kundalini) that is coiling at the base of the spine is awakened through the practice of kundalini yoga, an old and esoteric type of yoga. In order to channel and elevate this potent energy along the main energy channel (sushumna), Kundalini Yoga integrates dynamic movements, breathwork (pranayama), chanting (mantra), and meditation into its practice. Higher states of awareness and spiritual enlightenment are claimed to be facilitated by the activated kundalini.

Yoga in today scenario

Yoga is now extensively practiced by people from many origins and cultures and has become a global phenomenon. Due to its comprehensive approach to health, stress alleviation, and general well-being, its popularity has surged. Here is a thorough explanation of yoga in modern society.

Health and Wellness: Yoga is increasingly acknowledged as an effective method for fostering physical wellness. It has many advantages, including better cardiovascular health, flexibility, strength, and balance. Yoga postures (asanas) are practised to aid with muscular imbalances and chronic pain disorders, making it popular among people looking for natural solutions for different health difficulties.

Stress Reduction and Mental Health: Yoga is now acknowledged as a useful method for fostering physical health and fitness. It has many advantages, including better cardiovascular health, flexibility, strength, and balance. Yoga postures (asanas) are practiced to aid with muscular imbalances and chronic pain disorders, making it popular among people looking for natural solutions for different health difficulties.

Fitness and Sports: The worlds of sports and fitness have both adopted yoga. Yoga is a popular training method used by many athletes, including professional athletes, to improve flexibility, agility, and injury prevention. Its ability to increase core strength, balance, and mental clarity has made it a crucial part of cross-training for players from a variety of sports.

Workplace wellness: As part of their wellness initiatives, corporate offices and workplaces are increasingly incorporating yoga. Workplace yoga sessions help lower stress levels, increase staff morale, and raise productivity. The sedentary and stressful nature of contemporary work environments is seen to be effectively countered by regular yoga practice during breaks or after work hours.

Yoga Retreats and Tourism: As more people look for immersive experiences to develop their practice and recover in serene surroundings, yoga retreats and yoga tourism have grown in popularity. Numerous locations offer yoga retreats where visitors can fully immerse themselves in yoga, meditation, wholesome eating, and spiritual discovery.

Online and Virtual Yoga: Technology developments have

increased the accessibility of yoga more than before. People can practice yoga in the convenience of their homes and interact with instructors and other practitioners across the world through online platforms and virtual classes. Due to this convenience, yoga is now accessible to people who might not otherwise have access to local yoga studios.

Yoga for special populations: The accessibility of yoga has risen more than ever thanks to technological advancements. Through online platforms and virtual classes, people may practice yoga in the comfort of their own homes and connect with teachers and other practitioners all over the world. People who might not have had access to nearby yoga studios can now practice yoga thanks to this convenience.

Importance of yogic science in present lifestyle

It is impossible to exaggerate the significance of yogic science in contemporary life because it provides helpful techniques for overcoming the difficulties of contemporary living. Many people nowadays face stress, sedentary lifestyles, mental health problems, and different chronic health ailments as a result of the fast-paced, technologically advanced society in which we live. These issues are addressed by yogic science, which also offers a comprehensive strategy for total wellbeing. The following are some major justifications for why yogic science is crucial in today's lifestyle.

Stress reduction and mental wellness: High levels of stress and anxiety are frequently caused by modern lifestyles. Scientific studies have shown that yogic techniques including meditation, pranayama (breath control), and mindfulness techniques can lower stress and improve mental health. Regular yoga practice promotes emotional resilience, mental clarity, and an improved capacity for overcoming obstacles in life.

Physical fitness and flexibility: Numerous health problems are influenced by sedentary behaviors, long workdays, and little exercise. Different yoga types' dynamic movements and asanas (postures) aid in enhancing flexibility, strength, and balance. It is a great kind of training that can be modified to accommodate different fitness levels and medical needs.

Mind-body connection: The connection of the mind and body is emphasized in yogic science. In the modern lifestyle, where people may neglect their physical well-being owing to the demands of work and technology, this relationship is frequently overlooked. Self-awareness and a greater comprehension of how our ideas and emotions affect our physical health are fostered through yoga practices.

Improved concentration and focus: Focusing and concentrating has become difficult due to continual distractions and information overload. In today's demanding professional and academic situations, cognitive function, attention span, and productivity are crucial skills. Yoga places a strong emphasis on these skills.

Enhanced sleep quality: The quality of sleep can be hampered by aspects of modern lifestyles including excessive screen time and unpredictable sleeping habits. Yoga Nidra and other yogic relaxation methods encourage deep relaxation, lessen insomnia, and help people get better sleep.

Emotional balance and self-discovery: Yoga promotes introspection and self-discovery. The skills that practitioners acquire include emotional intelligence, reaction control, and cultivating a positive mindset. This promotes emotional harmony and aids in forging closer ties with both oneself and others.

Environment awareness and mindful living: Ahimsa (non-violence) and mindful living are two yogic ideals that encourage respect for all living things and the environment. By incorporating these ideas into our daily lives, we can live sustainably and mindfully while also developing a sense of responsibility for the environment.

Boosted immune system: Maintaining health and preventing infections require a healthy immune system. It has been demonstrated that several yoga asanas, particularly pranayama and stress management techniques, can strengthen the immune system and raise the body's resistance to disease.

Results

Stress and anxiety: Yoga's breathing exercises (pranayama), mindfulness exercises, and relaxation techniques can help lower stress and anxiety levels while fostering a sense of peace and mental clarity. Depression: Meditation and the mind-body connection used during yoga have been demonstrated to improve mental health and mood, which may help manage the symptoms of depression. Insomnia: Some yoga techniques, including Yoga Nidra and gentle asanas, might encourage relaxation and improved sleep, possibly assisting those who suffer from insomnia. Chronic pain: Yoga's gentle postures and stretching can increase flexibility and lessen muscle tension, providing comfort to people with chronic pain disorders like arthritis or lower back pain. Cardiovascular health: By lowering stress, lowering blood pressure, and fostering better circulation, regular yoga practice, together with a balanced lifestyle, can help to enhance heart health. Respiratory conditions: Yoga breathing techniques, or pranayama, can help people with asthma or other respiratory conditions by improving lung capacity and respiratory function. Diabetes: According to some research, yoga may improve blood glucose levels and aid in the management of diabetes when practiced in conjunction with dietary and lifestyle modifications. Obesity: Yoga techniques that encourage exercise and mindfulness may aid in weight loss efforts by enhancing body awareness and encouraging healthier eating practices. Hypertension: The breathing exercises and stress management strategies used in yoga may reduce blood pressure and control hypertension.

Conclusion

Yoga is being seen today at the world-wide level, which is helping everyone in different ways, making it easier for people to live life. Yoga has been making human life better day by day since ancient time Yoga has the ability to cure many diseases Yoga can increase cardiovascular health Improves respiratory ability Yoga can convert human body into good posture Yoga increases our flexibility Yoga keeps the mind fit Yoga improves sleep quality Yoga improves concentration and focus Yoga balances human emotions Connects the slow-body of human Works stress and enhances mental wellness Yoga should be done by certain people who spend their whole time sitting in one place all day, for them yoga is like a nectar.

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