

## Surya Namaskar: A Natural Therapy for Mind-Body Balance

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### ABSTRACT

Surya Namaskar is an ancient yogic discipline that focuses on the veneration of the Sun and involves asanas, pranayama, mantras, and continuous breathing exercises. It promotes physical strength, flexibility, and mental tranquility through a sequence of asanas and precise breathing techniques. Mental wellness is essential for individuals to cope with life pressures, realize their capabilities, study and work effectively, and contribute positively to their community. Practicing Surya Namaskar leads to improvements in various mental components, including study skills, academic performance, self-concept, attitude, mental calm, peace, restfulness, strength, awareness, and joy. Consistent practice can help manage stress and alleviate depression, fostering a sense of well-being and purpose while enhancing awareness of the interrelationship between the body, mind, and breath.

Physiological benefits of Surya Namaskar include muscle toning, improved flexibility, cardiovascular conditioning, hormonal equilibrium, improved digestion, weight reduction, increased energy, nutritional absorption, mood stabilization, emotional stability, and enhanced skin radiance. Consistent practice can help manage stress and alleviate depression, fostering a sense of well-being and purpose while enhancing awareness of the interrelationship between the body, mind, and breath.

**Keywords:** Yoga, Surya Namaskar, Sun Salutation, Mind body Balance, Health, Chakras.













### 1. INTRODUCTION

Surya Namaskar is an ancient yogic discipline dedicated to the veneration of the Sun. Surya signifies "Sun," whereas "Namaskar" denotes "Salutation" or greeting. Consequently, it is referred to as Surya Namaskar or Sun Salutation. (1) Thousands of years ago, this particular postural and respiratory program was formulated by the esteemed Patanjali and his pupils. To achieve optimal health, endurance, mental and physical equilibrium, and strength, it is recommended that individuals engage in this activity each morning while facing the rising sun and on an empty stomach. (2) Surya Namaskar comprises a sequence of asanas accompanied with precise breathing techniques. It rejuvenates every cell and tissue in the body. It provides physical strength, flexibility, and mental tranquility. Surya Namaskar comprises a sequence of asanas, including Pranamasana, Hastautthan Asana, padhashta Asana, Ashwasanchalan Asana, AshtangNamaskar, Bhujangasana, and Parvatasana (Table 1). During the practice of Surya Namaskar, Pranayama is coordinated with the asanas, and mantras are spoken at the commencement of each asana. Each mantra consists of the chanting of twelve names of the Sun to venerate it. Practicing these asanas stretches and compresses the abdominal muscles, providing a comprehensive massage to the organs, including the stomach, intestines, and pancreas, so enhancing their tone and functionality. Surya Namaskar rejuvenates and revitalizes organs afflicted by sickness. Surya Namaskar increases intestinal peristalsis, aiding in the expulsion of excess gas and alleviating constipation. (3)

Mental wellness is a condition that allows individuals to cope with everyday life pressures, realize their capabilities, study and work effectively, and contribute positively to their community. Surya Namaskar, a yoga practice, stimulates the Ida Nadi, influencing mental energy, well-being, and reducing mental health problems. Asanas, a form of yoga, regulates the mind, allowing for the rapid elimination of mental tensions. Surya Namaskar, performed gradually and accompanied by deep yogic breathing, promotes an increase in parasympathetic tone, leading to mental calm. Yoga practitioners with experience

saw a 27% increase in their levels of  $\gamma$ -aminobutyric acid (GABA). To stay focused on the activated chakra point in the spinal cord, one must maintain consciousness throughout the practice. Studies have shown that practicing Surya Namaskar leads to improvements in various mental components, including study skills, academic performance, self-concept, attitude, mental calm, peace, restfulness, strength, awareness, and joy. Additionally, it has been shown to decrease anxiety, physical stress, concern, and negative emotion patterns.(4)

**Table1: Asana and characteristics of Surya Namaskar.**

Asana	Step	Name	Beej Mantra	Mantra	Chakra
	1	Pranamasana	Om Hraam	Om Mitraya Namah	Anahata
	2	Hastha uthanasana	Om Hreem	Om Ravaye Namah	Vishuddhi
	3	Padahasthasana	Om Hroom	Om Suryaya Namah	Swadhisthana
	4	Ashwasanchalanasana	Om Hraim	Om Bhanave Namah	Ajna
	5	Parvatasana	Om Hraum	Om Khagaya Namah	Vishuddhi
	6	Ashtanga namaskar	Om Hrah	Om Pushne Namah	Manipura
	7	Bhujangasana	Om Hraam	Om Hiranyagarbhaya Namah	Swadhisthana
	8	Parvatasana	Om Hreem	Om Marichaye Namah	Vishuddhi
	9	Ashwasanchalanasana	Om Hroom	Om Adityaya Namah	Ajna
	10	Padahasthasana	Om Hraim	Om Savitre Namah	Swadhisthana
	11	Hastha uthanasana	Om Hraum	Om Arkaya Namah	Vishuddhi
	12	Pranamasana	Om Hrah	Om Bhaskaraya Namah	Anahata

### ***Historical and Philosophical Background***

Surya Namaskar, often known as the Sun Salute, was included into yoga in the mid-1930s. In the preceding decade, it evolved into a progressively favored training regimen that ostensibly elongated and fortified every muscle and joint in the body - an ideal type of exercise.

BhavanaRao Pant Pratinidhi improved and popularized the practice in the 1920s. In 1928, he authored a book titled Surya

Namaskars (Sun Adoration) for Health, Efficiency and Longevity.

In 1938, Pratinidhi authored a concise volume titled *The Ten-Point Way to Health*, which once more emphasized the significance of Surya Namaskar. This was the era when Surya Namaskar began to merge with yoga asana practice, particularly in Mysore, where Krishnamacharya was instructing. In the early 1930s, Krishnamacharya was instructing yoga, while a different instructor conducted a Physical Instruction Class focused on Surya Namaskar.

### ***Physiological Benefits of Surya Namaskar***

Sun salutation, also known as Surya Namaskar, is a Hatha yoga sequence consisting of twelve positions. It is often the first vinyasa in an extended yoga sequence and can also be referred to as "Salutations to the Sun." The King of Aundh is credited with teaching the Sun Salutation, which is the most common form of morning exercise in Indian institutions. Sun salutation offers numerous health benefits, including muscle toning,(5) improved flexibility, cardiovascular conditioning, hormonal equilibrium, improved digestion, weight reduction, increased energy, nutritional absorption, mood stabilization, emotional stability, and enhanced skin radiance. It also serves as a substitute for coffee and other stimulants, as it invigorates and conditions various body systems.(6) The Sun Salutation is beneficial for the cardiovascular, digestive, neurological, lymphatic, respiratory, and endocrine systems, facilitating the proper functioning of thyroid, parathyroid, pituitary, adrenal glands, testes, and ovaries. Consistent practice of Sun salutation can help manage stress and alleviate depression. In conclusion,(7) Sun salutations are a potent and effective method for stress management and depression alleviation, fostering a sense of well-being and purpose while enhancing awareness of the interrelationship between the body, mind, and breath.(8)

- **Cardiovascular and Respiratory System:** Surya Namaskar is more effective than walking for enhancing lung function. Bhujangasana, Chaturanga dandasana, and other chest-opening postures strengthen the intercostal and trapezius muscles, which in turn improves lung health by increasing lung vital capacity and contractility.(1) As a result of the excellent breath coordination performance, the maximum inspiratory pressure and maximum expiratory pressure are increased in stages. Pulmonary ejection fraction (PEFR), vital capacity (VC), forced expiratory volume in one second (FEV1), and forced vital capacity (FVC) are all altered. (9)

Surya Namaskar is a practice that strengthens the heart, improves blood circulation, and enhances resting cardiovascular parameters like pulse pressure and diastolic and systolic blood pressures. It enhances cardiovascular efficiency and fitness by boosting blood flow to the heart and affecting heart rate, breathing, and systemic and diastolic blood pressure.(10)

- **Musculoskeletal System:** Regular Surya Namaskar practice calls for four times more energy than everyday needs. Acting a good fat burner burns the fat over hips, belly, and abdomen. It increases muscle flexibility—especially in the legs, back, chest, buttocks.(8) Major hip flexor, or Psoas muscle, links T12 to all L1 and L2 to the lesser trochanter. These scientifically based postures are meant to cause varying degrees of compression and extension and motions of different parts, therefore affecting involuntary muscles and joints. For best compression to the lumbar spine, eg. Bhujangasana offers good back bending.(7) Adhomukhasvanasana stretches the hamstring muscles and entire spine. Regular Surya Namaskar can greatly improve endurance, strength, and handgrip.(11)
- **Digestive System:** The alternating stretching and compressing motions of Surya Namaskar stimulate the entire gut musculature and enhance its functionality. Padahasthasana and Bhujangasana are very effective in compressing and activating the abdominal organs and viscera. It accelerates evacuation, stimulates digestive fire, promotes a healthy appetite, facilitates speedy meal assimilation, and prevents disorders such as gastric ulcers. The study demonstrated a decrease in hepatic fat formation, accompanied by enhancements in the heterogeneity and echogenicity of liver parenchyma. It also expedites the conversion of glucose in the blood to energy, so preventing diabetes. In diabetic individuals, it is unequivocal that diabetes can be managed effectively via the regular practice of Surya Namaskar. Research indicates that individuals with obesity can substantially decrease their weight through the practice of Surya Namaskar.(12)

### ***Psychological and Emotional Well-being***

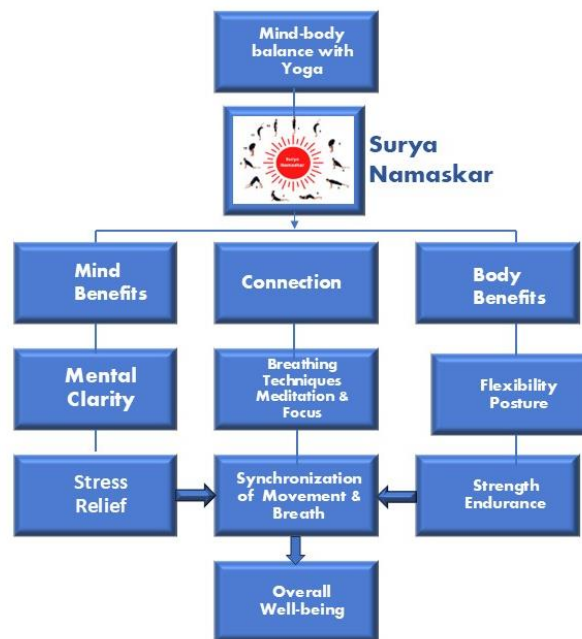
Practicing Surya Namaskar in the morning alleviates stiffness, invigorates the body, and rejuvenates the mind. During the day, it serves as a revitalizing substitute for caffeine, while at night, Surya Namaskar facilitates relaxation and promotes restful sleep. Surya Namaskar encapsulates the essential health benefits of yoga in a concise format. It is a comprehensive workout that offers advantages for physical health, as well as mental,(11) emotional, and spiritual well-being. It enriches the blood with oxygen and contributes to cardiac fortification. Surya Namaskar is helpful for the digestive system and the nervous system. It stimulates the lymphatic system and promotes respiratory health. Practicing Surya Namaskar enhances the Endocrine system and facilitates the healthy functioning of numerous endocrinal glands. The glands encompass the thyroid, parathyroid, and pituitary glands, in addition to the adrenal gland, testes, and ovaries. Surya Namaskar, akin to several workout modalities, offers psychological advantages to consistent practitioners. Performing the Sun Salutation will leave you feeling amazing.(13) Surya Namaskar is both calming and renewing, alleviating tension, stress, and anxiety. Surya Namaskar serves as an exceptional substitute for caffeine and other stimulants. Practicing Surya Namaskar can assist individuals with insomnia or sleep disorders in achieving sleep without the use of depressants. The consistent practice of

Surya Namaskar effectively mitigates stress and alleviates despair. You will exert a significant amount of energy while transitioning through the two sets of positions. Surya Namaskar cultivates concentration, and mastering the poses is profoundly rewarding.(14)

### ***Integration with Other Mind-Body Practices***

Surya Namaskar performed in quiet with full engagement consistently aids in soothing the mind and alleviating tension. Consistent exercise enhances psychological well-being. It provides a beneficial and enhanced influence on both physical and psychological characteristics. The various positions, breathing techniques, and mantra recitation cultivate a peaceful, relaxed, steady, and stress-free mind.(15) It enhances creativity, intuition capabilities, decision-making, leadership skills, and confidence. Children should practice Surya Namaskar during tests since it alleviates tension and anxiety. It also enhances sleep patterns. (Figure 1) By promoting a tranquil mind facilitates improved and more restful sleep at night and combats insomnia.(16)

While Surya Namaskar is performed in silence, complete concentration is always beneficial for enhancing mental clarity and reducing tension. Regular physical activity has been shown to improve mental health. For the better, it has a positive impact on both psychological and physiological variables. Participating in this practice involves a variety of postures, breathing methods, and mantra chanting, all of which contribute to the development of a mind that is more stable, tranquil, and free of tension. The ability to make decisions with confidence, originality, intuition, and leadership is enhanced as a result of this. Due to the fact that Surya Namaskar is effective in lowering levels of tension and anxiety, it is recommended that children practice it prior to taking exams. Additionally, it has the potential to improve one's sleeping patterns. aids in the reduction of insomnia and assists in the quieting of the mind, resulting in a more pleasant and tranquil night's duration of sleep.



**Figure 1: Mind-body balance through Surya Namaskar.**

### ***Scientific Evidence Supporting Surya Namaskar***

Surya Namaskar (Sun Salutation), a prominent yogic method, consists of a sequence of asanas—postures. Scientific research on its physiological, psychological, and metabolic effects has revealed numerous health benefits. Significant domains in which scientific research has demonstrated data corroborating the benefits of Surya Namaskar are outlined below:

**Arya, J., & Bora, M.(2023)** conducted a study that aimed to investigate the impact of Surya namaskar on the management of Dyslipidaemia patients in Bhiwani, Haryana. 60 patients aged 21-57 years were divided into two groups: a control group without routine changes and an experimental group that practiced Suryanamaskar for 30 minutes daily for 12 weeks and study found that Suryanamaskar training significantly improved the management of Dyslipidaemia, with a 0.05 level of confidence for all cases.(17)

**Godse,A.S,et al.(2015)** This study investigates the psychological effects of Surya namaskar on relaxation dispositions among

college students with high stress in Pune, India. A total of 419 students were assessed using the ABC relaxation theory. After the program, 40 participants in both groups completed the program. The experimental group showed higher R-dispositions of physical relaxation, mental quiet, and rest, while lower sleepiness and stress dispositions were observed in the control group.(18)

**Jakhotia, K. A. et al. (2015)** The study compared circuit training (CT), treadmill walking (TM), and Surya namaskar (SN) training in weight management and physical fitness enhancement in obese females in India. The study involved 119 females aged 20-40 with a BMI between 25.1 and 34.9 kg/m<sup>2</sup>. Results showed that all three methods were effective in weight and physical fitness management. CT and SN were more effective in improving cardiorespiratory fitness and upper limb muscle endurance, while SN was effective in improving body flexibility. The study highlights the need for efficient obesity management strategies for women in India.(19)

**Chandrasedkhar, M. et al (2014)** The study investigates the impact of pranayama on pulmonary functions in medical students. The study involved 50 first-year M.B.B.S. students who were given daily yoga training for two minutes. The results showed a significant increase in vital capacity, tidal volume, oesophageal reserve volume, breath holding time, endurance, and peak expiratory flow rate. The study concludes that yoga practice can improve pulmonary functions in healthy individuals and potentially prevent future respiratory diseases.(20)

**Parajuli, N., et al. (2023)** The study aimed to assess the effect of Surya Namaskar (SN) on mental health, self-control, and mindfulness among adolescent school children. The study involved 39 grade nine students from a private Indian school. The intervention group received SN for two weeks, while the control group received no intervention. Results showed a significant main effect of time on MAAS-A scores, and post-hoc analysis showed higher post-BSCS and MAAS-A scores in the SN group compared to the control group.(21)

**Deorari, M., et al. (2016)**The study investigates the therapeutic effect of Surya Namaskar on Emotional Maturity and Psychological Well-Being among college students. A pre-post study of 30 students from Govt. Girls Degree College, Haldwani, found that after 60 days of practice, emotional maturity and psychological well-being improved. The results indicate a significant effect of Surya Namaskar on these aspects.(6)

**Pal, V., & Chaudhary, N. (2016)** The study aimed to investigate the impact of Surya-Namaskar, Nadi-shodhan, and Gayatri Mantra Japa on the mental health of 25 college students aged 18-25. The intervention, applied for 45 days, showed a significant improvement in their mental health levels, indicating that these yogic practices can significantly enhance the overall well-being of these students.(22)

**Bhandari, M. D. S., & Rita, M. D. T. (2022)** The study aimed to compare the effects of physical exercise, specifically base run, and yogic exercise, specifically Surya-namaskar, on the psychological well-being of university boys. Sixty boys were divided into two groups, and their psychological well-being was assessed at baseline and after thirty days. Results showed significant improvement in both groups after a month of base run and Surya-namaskar intervention. Surya-namaskar was found to be significantly better in improving psychological well-being than base run.(5)

**Jaiganesh, D. K., et al (2022)** This study aimed to investigate the impact of Surya namaskar practices with and without yoganidra on stress levels in high school students. 45 students from Kandigai, Chennai were divided into two experimental and control groups. Suryanamaskar practices with yoga nidra were performed for 6 weeks, while yoga nidra practices were performed without. The data was analyzed using ANCOVA. Results showed that both suryanamaskar with and without yoga nidra significantly reduced stress, with Suryanamaskar combined with yoga nidra being more effective.(23)

**Thakur, K., & Sahu, D. P. (2019)** The study investigates the effects of Surya Namaskar on anxiety and mental stress in college girls. 100 girls aged 19-23 were randomly selected from District PurbaMedinipur, West Bengal State. The subjects were divided into two groups: Gr. ECG and Gr. CCG. The Hamilton Anxiety Rating Scale and Stress Questionnaire were used. After three months of practice, the study found that anxiety and mental stress significantly improved among Gr. ECG. This suggests that Surya Namaskar can significantly improve anxiety and stress levels in college girls.(24)

**Bhaskar, V. (2021)** The study investigates the therapeutic effects of yogic asanas and Suryanamaskar on blood glucose levels in type-II diabetic patients in India. The researchers used Blood Glucose Estimation (BGE) fasting and Analysis of Covariance (ACO) to measure the effects of the three techniques. Results showed that the combination of yogic asanas and Suryanamaskar significantly improved blood glucose levels in diabetic patients compared to the Suryanamaskar and Yogic Asanas groups.(25)

## 2. DISCUSSION

Surya Namaskar a spiritual practice, influences our responses to others and the world. Research shows it strengthens various systems, promotes physical health through relaxation, stretching, massaging, and toning muscles, and can be practiced for prolonged periods.(26)Yoga promotes balance in Pingala Nadi, promoting physical wellness. Slow practice, maintaining awareness through mantras and chakras, provides complete health on all levels, including physical, mental, social, and spiritual.(27)



Surya Namaskar, a Sanskrit phrase meaning "sun salutation," is a practice that focuses on the sun and involves asanas, pranayama, mantras, and continuous breathing exercises. Sadhana is said to be complete when all rituals are performed together.(28) The practice aims to achieve physical progress through asanas, mental steadiness through pranayama, and spiritual growth by raising consciousness on all chakras simultaneously.(21)

Surya Namaskar is a yoga practice that involves stretching the entire body through an asana, inhalation, and exhalation. It stimulates all bodily channels, improving physical health and balancing mental and physical energy.(29) The practice of Surya Namaskar is particularly beneficial for treating various sthauya disorders, such as kshudra shwas, trishna, alpa vyavaya, nidradhikya, and swed daurgandhya.(30)It also improves joint flexibility and mobility, making it useful for treating postural abnormalities like knock knees and bow legs.(31)

Practicing Surya Namaskar involves a systematic, deep, and rhythmic breathing pattern, which helps to empty the lungs of stale gas and increase oxygenation in the blood. Pranayama practices also show significant increases in vital capacity, tidal volume, and forced expiratory volume.(32)Surya Namaskar practice enhances physical efficiency, thoracic cavity dimensions, and prevents diseases like tuberculosis. It also reduces psychological hyperreactivity and emotional instability, potentially preventing asthma by reducing the growth of these diseases in less frequent areas.(33)

Surya Namaskar offers physical benefits and improves digestion through Padahastasana and Bhujangasana, which compress and activate the viscera and abdominal organs, promoting a healthy appetite and preventing stomach ulcers.(34)Repetition of Surya Namaskar can help control diabetes and obesity by reducing fat buildup in the liver and promoting glucose communication in the blood.(24)

Surya Namaskar is a heart-promoting practice that improves blood flow, lymph circulation, and immune system function. It aids in regulating reproductive systems, reducing pain, and improving sperm motility. It also aids in postmenopausal osteoporosis patients and adolescent girls with PCOS.(35)Surya Namaskar activates the neurological system, prevents hormonal imbalances, and preserves the pineal gland, promoting holistic health that includes physical, mental, and social aspects, preventing mental illness and social problems.(36)Social health requires emotional maturity and self-confidence, while spiritual wellness is crucial for happiness. Engaging in spiritual practice and ashram, as described in Swami Niranjananda Saraswati's Vedic text, forms spirituality. Emotional immaturity can lead to societal standards and health issues.(37)Surya Namaskar involves mentally touching all chakras, except the mooladhara in the subtle body, to increase awareness of the subtle body and psychic realms. It is a global spiritual practice, with the sun representing spiritual consciousness, allowing spiritually awakened individuals to perceive it.

### 3. CONCLUSION

Surya Namaskar is an essential part of yogic practice. No specific preparations are necessary for this exercise. Namaskar will swiftly rejuvenate your physical and mental wellbeing. This exercise aids in alleviating emotional difficulties. Practicing carefully with full awareness of chakras and mantras strengthens both the Ida and Pingala nadis almost equally. This technique renders us entirely healthy across all dimensions, contingent upon the practitioner's proficiency. When developed with practice, the body seemingly glides through various moves effortlessly and without conscious intention. Every body part appears to instinctively align itself in the appropriate position, at the correct moment, and in the proper sequence without exertion. The enhancement and purification of both physical and mental faculties is a fundamental accomplishment of yoga.

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