

# Effect of Sun Salutation in Human Body

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**Abstract-** Sun Salutation (Surya Namaskar) is a comprehensive yoga practice that integrates physical postures, controlled breathing, and mindfulness. This dynamic sequence of 12 postures provides holistic benefits, including improved cardiovascular health, enhanced muscular strength and flexibility, and better respiratory function. Regular practice also positively impacts mental well-being by reducing stress, improving concentration, and fostering emotional stability. Studies have shown its potential in weight management, hormonal regulation, and enhancing metabolic activity. This review explores the physiological and psychological effects of Sun Salutation, highlighting its role in promoting overall health and well-being.

**Keywords-** Sun Salutation, Surya Namaskar, Yoga, Physical fitness, Cardiovascular health, Mental well-being, Stress reduction, Flexibility, Metabolic activity, Respiratory function

## I. INTRODUCTION

Surya Namaskar or Sun Salutation is a sequential blend of 12 different yoga poses performed dynamically in synchrony with the breath. Although one can practice Surya namaskar at any time of the day, it would best to do it at sunrise as the sun rays help revitalize the body & the mind. Based on the requirement of the body, Surya namaskar can be done in 3 speed variation – slow, medium and fast pace.

The slow pace helps increase body flexibility, The medium pace helps in muscle toning, The rapid speed aids with weight loss and provides a great cardiovascular exercise.

Develop your sixth sense with Sun Salutations with Surya Namaskar and regular reflexes, the solar plexus rises from the almond extension to the palm. Sun light based plexus expansion, also known as second thinking, enhances our natural ability to become sharper and more focused. Solar plexus stress again leads to sadness and other negative tendencies. The complex benefits of Surya Namaskar keep the body and brain healthy. Since

then, the standard Surya Namaskar routine has been highly touted by all yoga experts. These Surya Namaskar tips can also improve your exercise and lead to better results.

The Science Behind Surya Namaskar It is said (by Rishis in ancient India) that unique parts of the body are ruled by devas (divine motifs or shining lights). The solar plexus (located behind the navel and essential to the human body) is said to be associated with the sun. This is the main reason behind the ancient proposal of rishis for the behaviour of Surya Namaskar, stating that the constant routine of this method enhances the solar plexus and thus expands creativity and instinctive abilities.

## II. METHODOLOGY

### 1. Pranamasana (prayer posture) 1and 12th

This is the posture of the person who performs the "pranama", ie. "Anjali mudra" Stand with straight legs and straight shoulders and loose hands by your side. Now join hands and exhale "Namaskara" posture (mudra). [6] Benefits: Provides relaxation

from anxiety and mental tension at first brings calmness and increases concentration.

## **2. Hasta uttanasana (raised arms pose) 2 and 11th**

After the prayer, raise your hands and pull your body back from your toes to your fingertips keeping your biceps close of the ears Effectiveness: Benefits: strengthening of the abdominal, respiratory and intercostal muscles supports the respiratory system and improves digestion can relieve anxiety and fatigue, especially in asthma.

## **3. Hast Padasana (hands to feet) 3 and 10th**

Now bend from the waist, touch the floor with both palms, keeping the back straight. The person should try to keep the knee as straight as possible and allow the head to touch the knee. Benefits: back muscles and increases flexibility. Stretches hips, hamstrings and calves. of the thighs and knees are also strained. Eliminate excess abdominal fat by working the abdominal muscles.

## **4. Ashwa Sanchalanasana (Horse) 4 and 9th**

Inhale to push the left leg back as far as possible, the foot should be bent to touch the floor. The right knee should be between the palms So look for and stick with it. Extend your feet with your toes to balance them on the ground. Benefits: Balances the central nervous system, strengthens the spine. It regulates, abdominal organs such as the kidneys and liver. Increases willpower. increases lung capacity.

## **5. Parvatasana (mountain pose) 5 and 8th**

The pose is similar to the Parvata or mountain. On exhalation, stretch the right leg back from Asana Ashwa Sanchal Pose and bring it parallel to the of the left leg. Lift your hips or wrists at the same time. Put your right hand and support weight The head must be placed between the hands. Benefits: Stretches the spine well. regulates the peripheral nervous system. Strengthens the muscles of the upper and lower limbs. Helps build strength and endurance in the arms, shoulder and wrist.

## **6. Ashtanga Namaskar (Salutations with Eight Parts of the Body) 6 and 9 th**

Place the knees gently on the floor, Push the hips back and slide forward, Chin and chest on the floor. Stay in this position and continue to touch the eight parts of the body, such as the palms, feet, knees, chest and chin, until you reach the floor. Benefits: Strengthens the musculature and respiratory muscles of the upper part and lower extremities.

## **7. Bhujangasana (Cobra Pose) 7th**

From the last position, lift your chest and slide forward into position. Bring your hands together and look at the sky. In this position, half of the body of is in the air and the rest on the ground. This is the position of the Cobra. Benefits: Supports and strengthens the back, especially the lower back where the lumbar spine is most compressed. Improves the flexibility of the spine and muscles. It supports the respiratory, digestive, reproductive and genitourinary systems and is beneficial for back pain, sciatica, asthma and menstruation.

# **III. DISCUSSION**

We've talked about the Surya namaskar health advantages here.

## **1. Helps in weight loss {obesity}**

Fast walking Surya namaskar is similar to physical aerobic exercises that help in weight loss. Yoga poses followed in Surya namaskar have a high dynamic coefficient which can help in weight loss.

## **2. Improves Cardiovascular Health**

Surya namaskar helps improve blood circulation and strengthens the heart. It also improves resting cardiovascular parameters such as systolic blood pressure, diastolic blood pressure and pulse pressure. The daily practice of Surya Namaskar to improve cardiovascular efficiency and fitness as Adhomukhashvanasana, uttanasana stimulates blood flow to the heart, increases blood flow to the heart. Blood circulation increases throughout the body to the level of organs, tissues and cells. Surya Namaskara shows systemic and diastolic blood pressure, respiration and heart rate.

### 3. Improves Respiratory Function

Surya namaskar exercise can improve lung function parameters such as forced vital capacity, forced expiratory volume (in 1 second) and peak expiratory flow. In addition to increasing lung capacity and contractility, thus improving lung health. It increases the maximum inspiratory pressure and the maximum expiratory pressure because it is a good representation of the staged respiratory coordination. Change forced vital capacity (FVC), forced expiratory vital capacity in 1. seconds (FEV1), forced expiratory flow (PEFR) and vital capacity (VC).

### 4. Hormone Activation

Surya namaskar activates and stimulates glands such as the adrenal and pituitary, thereby maintaining optimal secretion of growth hormone and dehydroepiandrosterone sulphate. Surya namaskar also stimulates the thyroid gland and helps regulate menstruation.

### 5. Digestive Aid

Surya Namaskar yoga poses involve continuous stretching and compression of the body, including the digestive organs. Regular practice of Surya namaskar helps to stimulate the abdominal muscles and digestive juices, which in turn promote the excretion of stool.

### 6. Stress Relief

Surya namaskar helps regulate the connection between mind, body and soul by relieving exhausting stress and tense muscles. Therefore, exercising regularly can help reduce stress and increase energy levels.

### 7. Effects on the Nervous System

The autonomic and peripheral nervous system, is useful for nervous problems. It also regulates the central nervous system and improves memory and various neurological vulnerabilities. Effective for back pain and diabetes.

Hypothyroidism and menstrual disorders. Regular exercise can lead to stronger abdominal muscles and less painful menstrual cycles.

### Contraindications

However, if you start to feel short of breath or dizzy, take a break. Pregnant women should also not exercise, but they can continue during menstruation because it promotes digestion, energy flow and waste excretion.

- A pregnant woman should not perform the Surya namaskar because it puts pressure on the back and the abdomen, which will harm the mother and the fetus.
- Avoid doing it during menstruation.
- Wrist injury can be avoided
- Patients with heart and blood pressure should consult a doctor.
- Any background issues, under supervision.

## V. CONCLUSION

Benefits of Suryanamaskar Not yet discovered more Till today all the benefits of yoga are not known. It can effectively improve physical health, mental health and effectively maintain proper and healthy secretion of various endocrine and endocrine hormones. can be recommended to patients because of the various health benefits of Surya namaskar. Renaissance and preserve the spirit of youth. This, -year-old yoga tradition explains its year-old healing potential. Hence, it is essential to incorporate Surya Namaskar into a modern lifestyle for a healthy mind and body.

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