



### Conceptual study of Yoga Aasana With Special Reference to Musculoskeletal System

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#### Abstract

**Introduction:** Yoga focuses harmony between mind and body. To achieve this, Yoga uses movements, breath, posture, relaxation and meditation order to establish a healthy, lively and balanced approach to life. Today's sedentary lifestyle there is lots of problems related to musculoskeletal system. Aasana is a part of Ashtangyoga can give solution to this problems by keeping the body strong and balanced. Yoga Aasana can help redress problems associated with poor body posture and structural decay. Aasana practices have positive effect on the musculoskeletal system. **Aim:** To study the effect of Aasana in Musculoskeletal system – a literary study. **Objective:** To create awareness among society about Yoga Aasana. **Discussion and Conclusion:** Role of Yoga Aasana in daily life is keeping one's body in perfect shape and mind in perfect condition. It also improves practitioner's steadiness, stamina, flexibility, endurance, neuromuscular co-ordination.

**Keywords:** Yoga, Aasana, Musculoskeletal system.

#### Introduction

Yoga and Ayurveda are two interrelated branches of the same great Vedic tree. Yoga is one of the most extraordinary spiritual sciences that mankind has ever discover.<sup>1</sup>

Different yoga poses have varied effect on a person's body and help to maintain a balance in all the three dosha. Yoga deals with harmonizing the mind, body and soul. It focuses on cleansing the various channels (srotas) in the body with its varied posture. It is the science of self realization<sup>2</sup> and Ayurveda is science of self healing.<sup>3</sup>

This paper will focus on one of the part of yoga that is Aasana. Aasanas are provide both spiritual and physical health, improve flexibility, strength and balance. It also reduce stress and to alleviate diseases *STHIRAM SUKHAM ASANA*<sup>4</sup> this quotation from Yogasutra specifying the characteristics of good Aasana. Aasana means a steady and comfortable posture.

Impact of Aasanas on body system is expansive and eternal. The musculoskeletal systems of human body are greatly benefited from regular practices of yoga aasana.<sup>5</sup> Body become more flexible and more able to adjust to

environmental changes after practicing Aasanas.

### **Aim**

To study the effect of Aasana in Musculoskeletal system – a literary study

### **Objective**

To create awareness among society about Yoga Aasana

### **Study Rational**

This study is aimed to create awareness in society regarding the importance of various Aasana in modern day which prevent diseases and also increases immunity.

### **Materials**

- Literature Review from Samhita
- Literature Review from modern
- Journals and website.

### **Conceptual study**

Musculoskeletal system is one of the important system of our body this system consist of muscle, bones and joints. It is designed for support, locomotion and protection of internal organs.<sup>6</sup> Today's modern practices also harmful to musculoskeletal system such as handling an incorrect load, incorrect postural activity ,lifting to heavy object, wearing high heel etc. Above such wrong habits leads to back pain, arthritis, slip disk, carpal tunnel syndrome. These types of disorders seriously impair life quality causing pain and discomfort.

The gentle stretching of muscles and joints releases muscle tension, so increases flexibility. The stretching of the joints in Aasana causes secretion of lubricant called the synovial fluid. This fluid is released in joint and keep the joint free from stiffness, friction, it reduces friction sound, it reduces heat, and increases the power of joint , helps to do

joint activity freely<sup>7</sup>.The result is to reduce stiffness, which will prevent arthritis.

Muscles get stronger and well toned if Aasana are practiced on regular basis. Aasana reduced excessive fat in abdomen and waist .All the organs and cells of the body become active thus increasing the immunity.

Some examples of Asanas are<sup>8</sup> – Padmassana,Masendrasan, Naukasana, Sarvangasan, Trikonasan, Sukhasan, Halasan.

### **Padmassana**

Stretches the ankle joint and knee joint  
Keeps the spin straight  
Help to develop good posture  
Keeps joints ,ligaments flexible,

### **Masendrasan**

Increases the elasticity of the spine  
Stretches the muscles on one side of the body whilst compressing the muscles on the other side  
Relieves back pain and stiffness,

### **Naukasana**

Strengthen the back and abdominal muscles  
Tones the leg and arm muscles

### **Sarvangasan,**

Promot good blood circulation  
  
Stimulating the parasympathetic nervous system  
  
Improves immune function

### **Trikonasan**

Gives strength to legs, feet, ankles  
  
Stretches hips, groins, hamstrings, calves and spine

strengthens back, neck and abdominal muscles

#### **Sukhasana**

Gradually strengthens muscles of the back and improves body posture

Builds physical and mental balance

#### **Halasana**

Increase flexibility and provides a feeling of relaxation during leg cramps

makes spinal cord strong and flexible.

### **Benefits Of Aasana**

#### **No lactic Acid Build Up**

When muscle contract the stored sugar in the body breaks down to lactic acid and additional energy is released. Much of the lactic acid produced must further be broken down further to be converted into water and carbon dioxide. This is done with the assistance of oxygen.

In strenuous exercise lungs breath faster and in order get sufficient oxygen to meet muscle demands. However this rapid uncontrolled breathing is inadequate in meeting the bodies demand for oxygen to oxidize and convert lactic acid into water and carbon dioxide. As a result there is an accumulation of lactic acid and free radicals in the muscle causing them to become fatigued.<sup>9</sup>

In yoga however the oxygen demand of the body is met through the union of the breath with the hold or transition of the Aasana. The oxygen supply can simply keep pace as the respiratory system is engaged and working with the body to promote the cellular conversion which is happening within the skeletal muscles of body

#### **Re-learning and promoting use of lost muscle**

Aasana practice has activated all muscles of body. As per occupation or sedentary lifestyle few muscle of our body does not involve in activity. These type of muscles are known as lost muscle. So involving these muscles in day today activity is possible due to Yoga Aasana. Learning how to maintain our correct posture, how to breath correctly these are the true gift of practicing Aasanas.

#### **Increases blood circulation**

Aasana contracts skeletal muscle. It helps to squeeze the veins, promoting them pump blood return towards the heart more quickly. Increase the volume of heart. This practice results in forceful contraction of the heart, thus it pumps more blood out. The greater flow of blood carrying an increased supply of oxygen to every tissue of the body.

#### **Relaxed muscle tone**

Aasan maintain the basal tension or muscle tone.<sup>10</sup> Muscle tone is a vital requirement in configuration and posture of our body. Aasana will stretch tight muscles and helps in developing full range of motion. The slow contraction of a muscle sustain for specific period of time followed by relaxation where the muscle is depolarized archives more benefits. Efforts given to practice yoga Aasanas can bring maximum contractibility of the entire muscular system and consequently raise the tone and increase efficiency.

#### **Guideline for practicing Yoga Aasana**

- Follow a proper procedure as mentioned in Grantha to attained best result
- Quite and well ventilated place it helps for more concentration and provides fresh air

- Nose and throat should be cleaned –so that breathing during Aasana remain comfortable
- Concentration should be on the movements
- Best time to practicing Aasana is in morning, before having breakfast
- Bladder and bowels are empty.

## Discussion

Muscle is activated by a group of nerve fibres arising from the brain and spinal cord that send a impulse to act in a coordination and smooth fashion. In case of muscle weakness there is need to strengthen the muscle. This is called facilitation. In case of muscle rigidity need to reduce the activity of muscle this is known as inhibition. In the case of erratic behavior the muscle should be brought under smooth control. All these could be achieved through proper utilization of Aasan practices.

Feedback mechanism in the muscle fibres, in the tendons connecting the muscle to the bones are activated through stretch achieved in Aasan practice. Stretch should be passive (carried by therapist) or active (carried by patient). Active stretch is more effective even if carried out minimally by the patient.

In normal exercise one aim to develop strength of muscle through contraction of muscle. In Aasan the muscle stretched fast or slow in a systemic manner thus providing a global improvement .This is fundamental difference between exercise and Aasan practices.

Practicing Aasana in day to day life achieve milestones in physiological factors like reduction in weight, increase chest volume, increase vital capacity. Changes occurs in biochemical factors these are

improve adrenocortical function, increase serum protein. Improvement in psychological factors are increases performance quotient, memory quotient, reduced mental fatigue<sup>11</sup>

Aasan practices perform always bilaterally this means person should perform Aasan using both limbs .This is important because of an inter hemispheric connection in the brain will carry information of activity of one side to opposite side.

Brain is always awake to all types of input from periphery. Muscles are grouped according to their ability to move joints in a particular direction. Muscle in the front are called extensor, those in back are called flexors, on the other hand adductors are located on the inner aspect and abductors on the outer aspect. These groups of muscle straighten, bend, and move joint inward or outward, respectively. It is important to stretch these various group of muscles to prevent imbalance.<sup>12</sup> Thus the Aasan plays an important role in rehabilitation.

Performance of Dharma is possible through the activity of the body alone. This means that the body mind should be in good shape to carry out our designated Dharma. Aasana practiced in an enthusiastic and dedicated manner seems to help a person in attaining peace.

In the truest sense of the word, we teach our body to maintain the correct position and consequently to function correctly.

## Conclusion

- Yoga Aasana mainly lubricate the joints, muscles, tendons and ligaments.
- Improves circulation and flexibility.

- All the Yoga Aasana or postures are controlling, purifying and coordinating the nervous system.
- Yoga Aasana regulate and control the secretion of hormones into bloodstream.
- Yoga Aasana develops better neuro-effector communications, improves strength of the body
- Increase resistance against stress and diseases.

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