

## “Effect Of Selected Prone And Supine asanas On back strength Of Female Hockey Players”

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### Abstract

Yoga is important Bringing harmony between the mind and body is the goal of a very subtle science that is grounded in spiritual discipline. Prone and Supine postures are doing while sleeping on the stomach and back. The position of all Prone and Supine postures is Makarasana, Naukasana, Salabhasanas, Marjariasana, Saral Bhujangasana, Ardha Dhanurasana, Savasana, Saral bhujangasana, Dhanurasana, Parsva Dhanurasana, Uttanapadasana, Vipareetakarani, Halasana, Matsyasana, Sarvangasana etc. The hockey players suffer from injuries which is associated with hockey like, hip and legs, & basically, most lower extremities. In this study the researcher aims to investigate the Back strength of the female hockey players through prone and supine lying asanas. Seventy female hockey players were chosen for this study and randomly assigned to one of two groups: the control group continued with their regular training, and the experimental group participated in 12 weeks of prone and supine lying asana training. The researcher felt it worthwhile to conduct and see the results of its impact. The study resulted significant effect on Back strength of experimental group with 0.05 level of significance.

**Keywords:** Makarasana, Naukasana, Salabhasanas, Saral Bhujangasana, Ardha Dhanurasana, Savasana, Saralbhujangasana, Dhanurasana, Parsva Dhanurasana, Uttanapadasana, Vipareetakarani, Halasana, Matsyasana, Sarvangasana Prone, Lower Back, Hip, Back Strength.

## Introduction

Yoga is important Bringing harmony between the mind and body is the goal of a very subtle science that is grounded in spiritual discipline. For healthy living, there are both art and science. The Sanskrit root word “yuj”, which meaning “to join”, “yoke”, “unite”, is where the term yoga comes from. (Niranjanananda Saraswati, 2002).

Asana is a Sanskrit word meaning “a special way of sitting or standing while practising yoga.” Traditionally, an asana is described as a “seat”. It is most frequently the seated position that is employed for meditation. The phrase is now more frequently used in yoga to refer to any Hatha yoga physical pose. Following the yamas and niyamas, it is the third limb Patanjali’s eight-fold ashtanga path. Originally a seated position for meditation, asana is a body posture. Hatha and contemporary yoga evolved to include a wider variety of seated meditation positions, including supine, standing, inverted, twisting, and balancing. According to the Yoga Sutras of Patanjali, written in the fifth century BC, "asana" means "to be seated in a position that is steady but relaxed." In English, asanas may be referred to as yoga poses or yoga postures. Sitting still for lengthy periods of time is one of the eight limbs of Patanjali's method. (Niranjanananda Saraswati,2002)

The more persistent intermediate and advanced students who insist on carrying on with their practises, the more they experience this wonderful, 5000+ year-old way of life. For the body, mind, and spirit, practise yoga. You learn how to stretch, unwind, and energise yourself using your body, breath, and mind. (Dr. Brij Goal Bhushan, 2017)

**Prone asana:** Prone postures is doing while sleeping on the stomach. The position of all Prone postures are makarasana, vipreeta naukasana, Bhujangasana, dhanurasana, salabhasanas which means crocodile posture.

**Supine asana:** Supine postures are great for all yogis. Supine postures are done lying flat on our back with face up. The position of all Supine postures is shavasana, naukasana, halasana, vipreetakarani. These postures can be practice in supine position which can be include in your yoga practice and their own yoga session. While the majority of postures are not aerobic in nature, they do stretch and exercise various muscle groups over an extended period of time while sending oxygen to the body’s cells.

Yoga may help you improve and complement your skills in any sport you choose to play. Most sports increase muscular strength and endurance, frequently in particular body parts. Your body and mind will be able to perform more effectively thanks to yoga, which can assist to correct any imbalances in muscle development. If your body is flexible and supple, your joints will stay lubricated, reducing the likelihood of injury. Physical and mental stability are two essential components of many sports. The physical and mental benefits of yoga asanas include improved muscular tone, less fatigue, and a calmer state of mind. Through yoga, the limbs gain equilibrium, strength, and relaxation. **(BKS Iyengar ,2015).**

In today’s world, being physically healthy is essential for any good performance. Varying activities call for varying levels of fitness, each one emphasising a distinct fitness component. The essential bodily organs that support health are the focus of yogic methods. The goal of yoga is to promote optimal bodily and organ function, which is the basis of physical health. A great routine to maintain the health of the body & critical organs includes practising attention, controlled breathing, relaxation techniques, and a variety of chosen prone and supine asanas that give the spine distinct movements. No matter how we define sport—in a narrow sense or a broad sense—yoga can help to promote sports. Yoga will help the body perform more effectively and assist to correct any imbalances in muscle development. Because the joints will be maintained lubricated, a flexible and supple body will be less prone to sports injuries. **(Gwen Lawrence,2018)**

Hockey is a competitive sport and the players and the teams taking rigorous training for achieving medal winning performance. Because of that rigorous training the hockey players suffer from injuries which is associated with hockey like lower extremities, leg,; basically, the large lower muscles. Strengthens of leg muscles could be helpful for minimizing the chances of injuries. The leg muscles also could be strengthened through yogic asanas. Different research studies shown that the prone and supine asanas and some other back extension asanas increase Back strength. Researches have done on different subjects with positive results. In this study the researcher aims to investigate the Back strength of the female hockey players through prone and supine lying asanas. The researcher felt it worthwhile to conduct and see the results of its impact.

## **Methods**

To assist this study 70 state level female hockey players from national hockey stadium certain subjects aged ranging from 13-18 years by mean and SD. The participants were randomly split in half, 35 each, of which organisation functioned as the Yogic Asana group or Experimental additionally, the second group acted as the control group. The requests Prior to administering the study and to avoid any misunderstanding regarding the split necessary on their division, the experimental measurements, testing, and asana regimen were explained to them. The researcher obtained each subject’s unique authority. Based on different literature findings of the

allied research studies and accessibility of instruments, experts’ view and researcher’s own concern The following factors were chosen for the study’s purpose:

**Dependent variable:**

- Back strength

**BACK STRENGTH:**

The term "back dynamometer" describes the apparatus in question. Subject stands holding the dynamometer bar with both hands, one hand above and one hand below the bar, and trunk slightly bent forward (10°-15°) at the hip. When the individual stands tall with their hands on their front thighs, the bar should be set such that it is just below the tips of their fingers. The distance between the hands is the same as the distance between the shoulders. The ride up on the lift is smooth and steady; there is no bending or twisting of the spine. This evaluation may be taken many times.

To determine the back strength of the selected Female state level hockey players following methods and tools were used.

**Equipment:** Dynamometer (Back strength was measured with the help of Back Dynamometer)

**Test administration:** This test is to measure Back strength of athletes. Before you begin, make sure the dial has been reset to zero. On the dynamometer platform, the participant was instructed to stand with feet shoulder-width apart. With hands pointing down, the bar was held in the middle of the level where the thigh and trunk meet. The knees were bent just a bit. The individual was instructed to raise the dynamometer’s bar so that, at the top of the lift, his knees were almost straight. Three trials were allowed for each Subject.

**Scoring:** The subjects were tested 3 times. Best of three trials were taken. The scoring was recorded in kilograms. The tests were administered on the subjects of female state level hockey players. The assessments were evaluated at the yoga training with prone and supine lying asanas for 12 weeks. Back strength was evaluated in the individuals prior to training (pre-test), then the subjects were tested once more on the chosen variable 12 weeks afterwards.

**Training Protocol:**

The study's purpose required that only the experimental group get training, while the control group received no instruction whatsoever. They perform as passive control group. The training protocol (prone and supine asana) of 12 weeks was programmed below:

The training protocol included these following prone and supine lying asanas:

<b>Warm up exercises</b>		
<b>MAIN PRACTICE</b>	<b>ROUNDS</b>	<b>TIME</b>
OPENING PRAYER	1	2 min.
Hands up and down breathing technique	1	1 min.

**“Effect Of Selected Prone And Supine asanas On back strength Of Female Hockey Players”**

Ardha katichakrasana	20	2min.
Trunk rotation	20(10 Clockwise and 10 Anticlockwise)	2 min.
Knee rotation/ leg strength	1	2 min.
Jumping jack	50 counts	2 min.
Surya Namaskar	5	5 min.
Sthli tadasana	1	2 min.
<b>TOTAL</b>		<b>18 MIN.</b>

<b>Prone line Asana</b>		
Saral Bhujangasana	2	2 min.
Bhujangasana	2	2 min.
Ardha dhanurasana	2	2 min.
Dhanurasana	2	2 min.
Vipareet Naukasana	2	2 min.
Ardha Shalabhasana	2	2 min.
Relaxation in Balasana	1	1 min.
<b>TOTAL</b>		<b>13 MIN.</b>

<b>Supine line Asana</b>		
Naukasana	2	2 min.
Chakrasana	2	2 min.
Vipareetakarani	2	2 min.
Sarvangasana	2	2 min.
Halasana	2	2 min.
Karnapidasana	2	2 min.
Closing prayer	1	2 min.
<b>TOTAL</b>		<b>14 MIN.</b>

**Statistical Analysis:**

For the present study, as we have two different groups and, in both cases, we have to check the pre and post data, so, we conducted paired t-test to determine Whether there is a significant difference between the two groups with relation to the control group and before and after the 12-week training period.

## Results

**Table 1** Measures of Central Tension and Flexibility in the Back: Descriptive Statistics (Mean and Standard Deviation).

Variables	Control Group		Experimental Group	
	Mean	Standard Deviation	Mean	Standard Deviation
Pre-Back Strength	53.03	1.48	51.88	1.09
Post-Back Strength	52.99	1.33	52.89	1.21

Table 1. Experiment and control group mean and standard deviation for back strength are shown.

**Table 1:** Dependent sample t-test of Back strength between the Hockey Players; Control and Main Group

Variables	Control Group		Main Group	
	t- Value	p-Value	t- Value	p-Value
Back Strength	0.158	.875	5.273	.000

Prior to and following 12 weeks of training,

Table 2 displayed the inferential statistics(dependent t-test) for the Control Group and experimental Group.

## Discussion

The training had a significant effect on the experimental group, as shown in Table 2 of the paired t-test results, while no significant change was obtained for the control group. The p-value was 0.000, which is less than the 0.01 level of significance. The following reasons might be attributed to the results. The female hockey players are elite athlete. They have undergone different tough training protocol. The players might have faced low

adaptation in their back strength due to the lack of recovery and other training overload. So, the twelve weeks yoga training have given improvement in their back strength.

Moreover, the improved back strength in the athlete might increase more significantly with the longer practice. This twelve-week effect has resulted sufficient to improve in their back strength.

On the other hand, the significant effect might be the result of regularity of the training. Due to their positive approach with the training protocol along with professional practice and training has given regularly.

So, at the end we can say that twelve weeks yogic intervention played an effective role in the improvement of back strength of female hockey players. The asanas are used in this intervention were effective on these subjects.

## **Conclusion**

Prone and Supine Asana improves back strength. The core health related physical fitness variable is the back strength of every sports person. Hence, Prone and Supine lying Asanas shall act as a major training factor for a every competitor with view to its multi-faceted benefits.

## **Conflict of Interest**

Authors declare no conflict of Interest.

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