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**Dr. Khushal Jagtrao Alaspure**  
Director, Department of  
Physical Education,  
Arts College Badnera Railway  
District Amravati, Maharashtra,  
India

## Study of hatha yoga on flexibility and co-ordination of human body by selected asanas

**Dr. Khushal Jagtrao Alaspure**

### Abstract

The study was the effects of asanas practices on flexibility and co-ordination variables of human body. For the purpose of the study 20 students were selected randomly from Arts College Badnera, Amravati (Maharashtra) India as subjects. Age of the subjects ranged from 18 to 20 years. All the subjects were having four day asanas training program. A specific asanas training programme was conducted for the duration of six weeks. A pre and post sit and reach test and Eye hand coordination test were conducted before and after the training programme. For analyzing the data, mean, Standard deviation and t-test were computed by means of Microsoft Excel 2007. It is concluded that the effect of six weeks asanas training program had shows improved performance with regard to flexibility, which is significant. Effect of six weeks asanas training program had shows improved performance with regard to co-ordination, but which is insignificant.

**Keywords:** Hatha yoga, flexibility, co-ordination, human body, asanas

### Introduction

Human anatomy and physiology is a vast subject, as is the art of hatha yoga. Never the less, combining knowledge from both fields is extremely beneficial to the yoga practitioner. Athletes can improve their performance and experience fewer injuries through a basic understanding of their musculoskeletal system. Similarly, yoga practitioners can benefit from the application of Western science to their practice development. It is not necessary to memorize hundreds of muscles and bones to experience the benefits of applying science to yoga. What is necessary is the functional understanding of a manageable number of key anatomic structures in their settings as they relate to hatha yoga. Knowledge of these structures can be applied immediately to optimize your practice, break through blockages and avoid injuries<sup>[1]</sup>.

Yoga has a long history, it is very ancient. Yoga involved in Indian continent over a period of 5000 years. It has its roots in the Hinduism and Brahmanism, yet our contemporary western approach of yoga has titled to do any particular belief of religion. However it can be said that contemporary western approach to yoga is only very small portion of what yoga is all about. Yoga is deep well of knowledge which helps quell our thirst for truth. Yoga content several branches of learning, which includes hath yoga, the physical branch of yoga, everyone in the west is familiar with. Ascetics living primarily in the southern portion of India developed yoga. These ascetics led much disciplined lives, they were vegetarians and they adhered to a non-violent philosophy. They lived close to the earth; they observed nature, and the animals and themselves. The yoga is derived from Sanskrit, and it simply means 'to bind together' and 'to reunite'<sup>[2]</sup>.

Hatha yoga is the most common form of yoga practiced in Western societies. It involves asanas to develop strength, flexibility, balance and the co-ordination of the mind, body and breath, in combination with pranayama and meditation exercise to calm the mind and develop self-awareness<sup>[3]</sup>. The different styles of hatha yoga that have developed are characterised by the rate at which asanas are performed, the physical intensity and level of difficulty, the relative emphasis on body alignment and relaxation and the ambient temperature in which it is practiced<sup>[4]</sup>.

### Correspondence

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Director, Department of  
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India

**Material and Methods**

For the purpose of the study 20 students were selected randomly from Arts College Badnera, Amravati (Maharashtra) India as subjects. Age of the subjects ranged from 18 to 20 years. All the subjects were having four day asanas training program. A specific asanas training programme was conducted for the duration of six weeks. A pre and post sit and reach test

and Eye hand coordination test were conducted before and after the training programme. For analyzing the data, mean, Standard deviation and t-test were computed by means of Microsoft Excel 2007.

**Practice Schedule**

Sr. No.	Name of the practice	Duration		
		1 to 2 Weeks	3 to 4 Weeks	5 to 6 Weeks
		30 minutes	45 minutes	60 minutes
1	Akarna – Dhanur - asana	3	5	10
2	Anjaneya – asana	3	4	5
3	Ardha Chandra - asana	2	4	4
4	Ardha – Matsyendra - asana	2	4	4
5	Baddha Kona Asana	2	2	3
6	Bala Asana	2	4	4
7	Chakra Asana	2	4	4
8	Dhanur - asana	2	2	3
9	Sarvanga – asana	2	2	3
10	Shalabha – asana	2	4	5
11	Shavasana	8	10	15

**Statistical Analysis**

**Findings**

The data collected on 20 subjects before and after six week training program of asanas training on flexibility and co-

ordination variable were analyzed by using the ‘t’ test. Therefore the separate tables and graphs have been presented for each variable as follows.

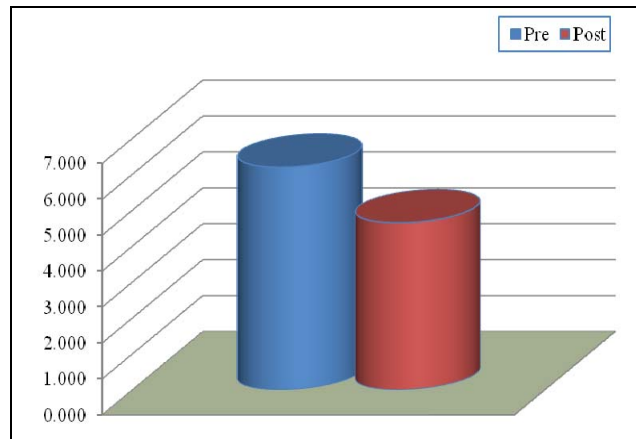
**Table 1:** Significance difference of mean of flexibility between pre and post test

Variable	Test	Mean	SD	SE	MD	Ot	df	Tt
Flexibility	Pre	6.200	1.240	0.362	1.550	4.284*	38.000	2.101
	Post	4.650	1.040					

\*Significance at 0.05 level.

Table-1 indicates that the obtained ‘t’ value of (4.284) between pre and post of college students in flexibility was found to be significant at 0.05 level of confidence as we obtained value of

(2.101) with 38 degree of freedom. Graphical representation of above table is made in figure No. 1.



**Fig 1:** Mean value of Pre and Post of flexibility

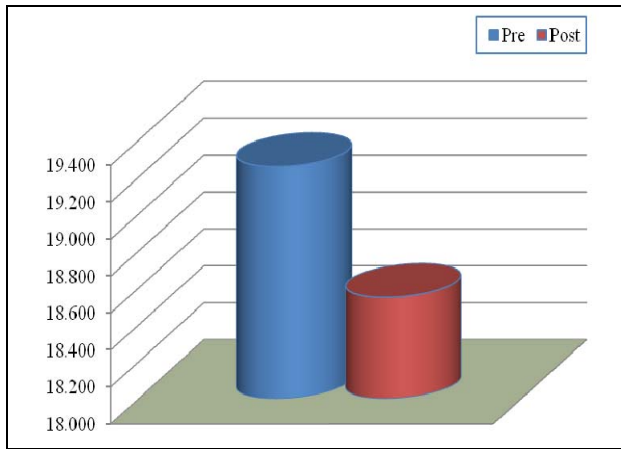
**Table 2:** Significance difference of mean of eye hand coordination between pre and post test

Variable	Test	Mean	SD	SE	MD	Ot	df	Tt
Eye hand coordination	Pre	19.257	3.227	0.951	0.708	0.745	38	2.101
	Post	18.549	2.768					

\*Significance at 0.05 level.

Table-2 indicates that the obtained ‘t’ value of (0.745) between pre and post of college students in eye hand coordination was found to be insignificant at 0.05 level of confidence as we obtained value of (2.101) with 38 degree of freedom.

Graphical representation of above table is made in figure No. 2.



**Fig 2:** Mean value of Pre and Post of eye hand coordination

### Conclusion

It is concluded that the effect of six weeks asanas training program had shows improved performance with regard to flexibility, which is significant. Asanas are most important to improve flexibility, co-ordination now it is very essential for healthy life.

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