



# International Journal of Physical Education, Sports and Health

P-ISSN: 2394-1685  
E-ISSN: 2394-1693  
Impact Factor (ISRA): 4.69  
IJPESH 2016; 3(1): 57-59  
© 2016 IJPESH  
www.kheljournal.com  
Received: 14-11-2015  
Accepted: 16-12-2015

**Lakhmi Chand**  
V.P.O Sangwari, Distt.  
Rewari, Haryana, India.



Lakhmi Chand

## An impact of pranayama on breath holding time of school students of district Rewari, (Haryana)

**Lakhmi Chand**

### Abstract

The aim of this study was to conclude the effect of 6 weeks yoga practices (Pranayama) on Breath holding capacity of school going children of district Rewari, (Haryana). The method of this study was experimental research and sample was 60 students of senior secondary school of district Rewari, (Haryana) (14-17 Aged). Sixty subjects were randomized into two groups experimental group accomplished yoga practice (Pranayama) for six weeks. Paired sample 't' test was used to analyze the data of the study in use of SPSS software. Result showed that eight weeks pranayama significantly increased the breath holding time of school children it is also recommended other parameters of respiratory system need to investigate for further information of Haryana.

**Keywords:** Pranayama, Breath holding time, Yogic exercise

### 1. Introduction

Pranayama is the art of breath control whereby the mental and physical state is brought to a harmonious state of health and serenity. It is a technique that increases, controls and frees the flow of prana throughout the entire body. The practice of pranayama brings awareness to the breath, which then connects us rapidly with our inner physical and emotional state.

Our relationship with life is mirrored in our breathing. When we're nervous or excited our breathing becomes shallow, jerky and rapid. A relaxed, quiet state will create slow and deep breathing. Rishis of the past noted that animals with rapid rates of respiration such as mice who take 1,000 breathes a minute have a shorter life span than animals with a slow respiration rate such as the tortoise which breathes four times a minute and can live up to 300 years. In this way life span was measured in terms of the rate of respiration, slow breathing increasing life span and rapid breathing hastening death.

Humans breathe about 16-18 times a minute, inhaling about 13,000 litres of air every 24 hours. Due to exercise, anger, passion and anxiety the respiration rate increases, straining the heart and decreasing the life span. The slow, deep breathing and retention of breath in pranayama helps to compensate for the damage incurred by rapid, shallow breathing. Elizabeth Barrett Browning shared Yoga's view of longevity stating "He lives most whoever breathes most air." Many of India's famous Yogis attributed their longevity, photographic memory and boundless energy to their diligent practice of pranayama. Swami Sivananda, born 1887, was a world-renowned Yogi who ascribed his "continuously bursting fountain of energy to the regular practice of pranayama." It also endowed him with a phenomenal memory and the capacity to do many things at the same time.

Pranayama also ensures a rhythmic harmony between the left bodily channel (ida) and the right bodily channel (pingala.) This is important as these nadis govern opposite polarities in the body. Pingala which is stimulated by right nostril breathing promotes heat, masculinity, extroversion and digestion. Left nostril breathing stimulates ida which encourages cold, femininity, introspection and fertility. Roughly every hour our breathing shifts from one nostril to the other whereas pranayama encourages us to breathe through both nostrils in order to maintain our bio-energetic balance. Humans have been known to survive for months without Water and weeks without food yet die within minutes when deprived of oxygen. Respiration represents the power of prana, the ultimate expression of energy and life. When prana flows abundantly through our beings we Become aware of a special glow to our skin and

**Correspondence**  
**Lakhmi Chand**  
V.P.O Sangwari, Distt.  
Rewari, Haryana, India.

eyes, a spring to our step and the pulse of energy in every cell, vibrating vitality through every thought, word and deed. Conversely, an impeded or deficient flow of prana is marked by constant fatigue, dull skin and eyes and loss of enthusiasm. Breathing exercises are the easiest way to increase the flow of prana in our body and to unleash dormant prana. In the ultimate sense prana is the subtlest form of all energies that permeate and sustain life in the cosmos. It is the underlying power supplying all universal forces allowing the ocean to surge, the sun to raise, flowers to bloom and the earth to revolve. The localised aspect of prana is the force uniting mind, body and spirit together known as the bio-energy field in humans. This flows from the spirit and is also absorbed from the atmosphere instantly through breathing oxygen and slowly through the colon with the transformation of food into energy. Prana travels via etheric channels known as nadis in the body, a concept similar to Chinese medicine's chi, which travels along meridians. The main nadis are the central staff from the central sulcus down the spinal cord (sushumna) and the two channels, which flow vertically around this, on the left side (ida) and on the right (pingala.) These nadis are represented in the medical caduceus symbol. According to the Shiva Samhita there are 350,000 secondary nadis pervading the body, governing all physiological and psychological processes. Absorbed through the medium of breath, prana has specific actions on the respiratory, digestive, circulatory, cardiovascular, and lymphatic and nervous system functions. Most importantly prana governs all the mental processes including thoughts, feelings, the will and reason. Longevity, health and vitality are all determined by the quality of prana flowing in our bodies. The root cause of all disease is a chaotic, blocked or deficient flow of prana through the body. Healing modalities such as reiki, homoeopathy, herbalist, bodywork, midwifery, rebirthing, and relaxation therapy employ techniques that create an abundant and harmonious flow of prana through the body that eliminates disease.

**Objectives of the Study**

An Impact of Pranayama on Breath Holding Time of School Students of District Rewari, (Haryana)

**2. Material and Methods**

Sixty school students, who volunteered to be the subject, were selected from district Rewari (Haryana) School. The age of the subjects was in range 14 to 17 years. Subject were randomly assigned to either control group (n=30) and experimental group (n=30), using simple random sampling technique. Experimental group under went through for eight weeks pranayama training programme. The training schedule is twice a day in the morning and evening session. The duration of the training is an hour daily. No training was given to control groups. Data were collected on breath holding capacity by standard timing instruments at pre and post experimental stages. Both the groups were administered with pre-test for assessment of their breath holding time. Experimental group was given training of pranayama for duration of eight weeks after the experiment both groups were tested again. The data collected with the standard procedure was statistically analyzed by using 't' test at 0.05 levels of significance.

**3. Result and Discussion**

To assess an impact of pranayama on breath holding capacity, the mean, and standard deviation and 't' ratio was computed by using SPSS-16 version and result pertaining to this has been presented in below tables.

**Table 1:** Descriptive Statistics of Breath Holding Capacity (BHT of Experimental Group)

Variables	Subject	N	Mean	SD	't'
Experimental group	Pre test	30	28.62	6.247	9.43
	Post test	30	80.32	10.381	

Significant at 0.05 levels

Table-1 indicates that mean, standard deviation of pre-test of Breaths Holding time, of Experiment group, which were found to be 28.62, 6.247 and Post-test value were found to be 80.32, 10.381. The value of paired sample of 't' ratio of breath holding, which were shows that there was highly significant difference with pre-test and post-test value of BHT. The calculated value of 't' was found to be 9.43 at 0.05 level of significance which was higher than the tabulated value of 't' at 0.05 level of significant.

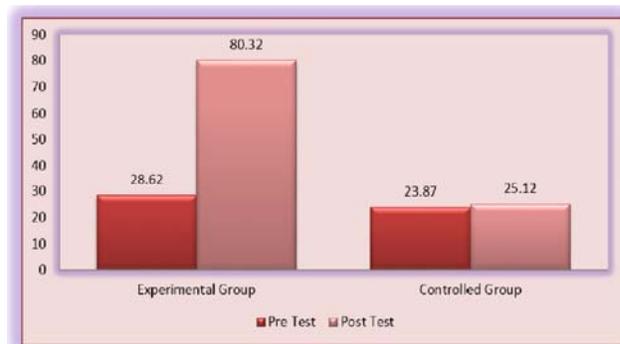
**Table 2:** Descriptive statistics of Breath holding capacity (BHT of Controlled Group)

Variables	Subject	N	Mean	SD	't'
Experimental group	Pre test	30	23.87	4.219	0.542
	Post test	30	25.12	4.521	

Significant at 0.05 levels

Table-2 reveals that there is no significant difference found between calculated and tabulated value is at 't' ratio at 0.05 levels of significance in control group.

It was also found that the 't' value of experimental group are more than 't' value of control group in Post-test was highly significant differences between experimental group and control groups. It is also depicted in graph-1 drawn below.



Graph-1

**4. Conclusion**

The result of the showed that yogic practices significantly influenced on breathe holding time. It also showed increase in capacities related to breathe holding time like O2 consumption, tolerance capacity.

Therefore, it was concluded that various parameters of respiratory improved after pranayama and also revealed a significant increase in force vital capacity, peak respiratory flow rate and maximum voluntary ventilation.

**5. References**

1. Bhole MV. Treatment of Bronchial Asthma by yogic methods. Yoga Mimansa, 1967; 9(3):33-41.
2. Nayar HS, Mathur RM, Sampath KR. Effects of yogic exercises on human physical efficiency. Indian Journal of Medical Research. 1975; 63(1):1369-1376.
3. Dr. Goldblack. Journal of Experimental Medicine, 1953.
4. Udupa KN, Singh RH, Settivar RM. A Studies of the effect of some yogic breathing exercises in normal

persons. Indian Journal of Medical Research. 1975; 63(8):1062-1065.

5. Sivansankaran, *et al.* The effect of a six week programme of yoga and meditation on brachial artery respectively do psychosocial intervention and influence vascular tone, clinical cardiology, 2006; (29):393-398.