REVIEW OF RELATED LITERATURE

Effect of Stretching Yogic Exercises on Private Sectored Employees

200 employees working in private sector in Ahmedabad districts were randomly selected who did routine table work or computer work. They worked 6 to 8 hours a day and fall under the age group of 20 to 50 years. The findings of the study were quite great revelations. The findings had thrown light on the spectrum of areas in relation of the benefits of stretching yogic exercises. The main benefits of employee improved flexibility, circulation balance of the body, mind and breathing, increased concentration, rejuvenated joint function, reduction in stress and joy.

Yogic Practice to develop Sports Performance and Benefits of Yoga,
Desai Priyanka Sambhaji, Asian Journal of Physical Education and Computer Science in Sports, ISSN 0975-7732, Indian Federation of Computer Science in Sports

Yoga is a process to control and develop the mind and body to gain good health, balance of mind and self realization, though yoga has the potential power to make up healthy add to our vigor, still most people lack the knowledge of systematic practice of yoga.

The effect of Yoga practice on Expiratory Reserve Volume (ERV) of Air in Lungs

The purpose of the study was to analyze the effect of yoga practice on Expiratory Reserve Volume (ERV): the volume of air that can be forcefully expired after a normal or resting expiration. This 30 college men students were selected at random from government degree college, Karvetinagar, of Andhra Pradesh. The experimental and control group were tested for ERV prior to, and after the yoga training programme. The collected data was subjected to ANCOVA. The level of significance to test the ‘F’ ratio obtained the covariance was fixed at .05 level. The study reveal yoga practitioners who have the additional practice of yoga asana and pranayama has improved the Expiratory Reserve Volume (ERV) rather than the control group, it is very good culture for all to have good health by less effort, and it is very easy to practice in limited area.

Effect of Aerobic Exercises and Yogasanas on Flexibility
Rajkumar Karve, Pratap Singh tiwari and Manjunath S. R., Asian Journal of Physical Education and Computer Science in Sports, ISSN 0975-7732, Indian Federation of Computer Science in Sports

The purpose of the study is to assess the effect of Aerobic Exercises and Yogic Asanas on flexibility of students (boys) in the age group of to 16 to 18 years. To achieve the purpose of the study 60 boys studying in government PU College of Gulbarga were selected at random as subjects of the study and divided into three groups of 20 subjects each: all of them were taking part in routine physical education programme as per the schedule of the college. Group A and Group B are the experimental groups and group C served as control group. Group A practiced in
the selected yogasanas and group B practiced the selectee aerobic exercises and group C didn’t participate in any exercises. To measure the shoulder flexibility and trunk flexibility Goniometry and Leighton Flexometer were to collect the data. The data was statistically analyzed using mean difference method (t-ratio) and ANCOVA. Aerobic exercise and yogic asana training programme are effective in improving flexibility of the shoulder and trunk. Yogic asana training programme was found to be more effective as compared to the aerobic exercise programme in developing the flexibility. No significant improvement in the case of control group may be a reflection of inactivity.

**Aerobic Capacity & Perceived Exertion after Practice of Hatha Yogic Exercises**

Ray US, Sinha B, Tomer OS, Pathak A, Dasgupta T, Selvamurthy W., Exercise Physiology Laboratory, Defense Institute of Physiology & Allied Sciences, Lucknow Road, Timarpur, Delhi 110054, India.

**BACKGROUND & OBJECTIVES:** Reports on the effect of yogic exercises on aerobic capacity are few. There is also no literature available on the effect of yogic exercise on perceived exertion (PE) after maximal exercise. In this study the effect of training in Hatha yogic exercises on aerobic capacity and PE after maximal exercise was observed. **METHODS:** Forty men from the Indian army (aged 19-23 yr) were administered maximal exercise on a bicycle ergometer in a graded work load protocol. The oxygen consumption, carbon dioxide output, pulmonary ventilation, respiratory rate, heart rate (HR) etc., at maximal exercise and PE score immediately thereafter were recorded. The subjects were divided into two equal groups. Twelve subjects dropped out during the course of study. One group (yoga, n = 17) practiced Hatha yogic exercises for 1 h every morning (6 days in a week) for six months. The other group (PT, n = 11) underwent conventional physical exercise training during the same period. Both groups participated daily in different games for 1 h in the afternoon. In the 7th month, tests for maximal oxygen consumption (VO2Max) and PE were repeated on both groups of subjects. **RESULTS:** Absolute value of VO2Max increased significantly (P < 0.05) in the yoga group after 6 months of training. The PE score after maximal exercise decreased significantly (P < 0.001) in the yoga group after 6 months but the PT group showed no change. **INTERPRETATION & CONCLUSION:** The practice of Hatha yogic exercises along with games helps to improve aerobic capacity like the practice of conventional exercises (PT) along with games. The yoga group performed better than the PT group in terms of lower PE after exhaustive exercise.

**Energy Cost And Cardio respiratory Changes During The Practice Of Surya Namaskar**


Surya Namaskars (SN), a group of Yogic exercise consists of a set of twelve postures which is practiced by some of the yoga practitioners. The present study was undertaken to observe critically the energy cost and different cardio-respiratory changes during the practice of SN. Twenty-one male volunteers from the Indian Army practiced selected Yogic exercises for six days in a week for three months duration. The Yogic practice schedule consisted of Hatha Yogic Asanas (28 min), Pranayama (10.5 min) and Meditation (5 min). In the Yogic practice schedule 1st they practiced Kapal Bhathi (breathing maneuvers) for 2 min then Yoga mudra (yogic postural exercise) for 2 min, after that they took rest until oxygen consumption and heart
rate (HR) came to resting value. Subsequently subjects performed SN for 3 min 40 seconds on an average. After three months of training at the beginning of the fourth month subjects performed entire Yogic practice schedule in the laboratory as they practiced during their training session and experiments were carried out. Their pulmonary ventilation, carbondioxide output, Oxygen consumption, HR and other cardio-respiratory parameters were measured during the actual practice of SN. Oxygen consumption was highest in the eighth posture (1.22+/-0.073 l min (-1)) and lowest in the first posture (0.35+/-0.02 l min (-1)). Total energy cost throughout the practice of SN was 13.91 kcal and at an average of 3.79 kcal/min. During its practice highest HR was 101+/-13.5 bpm. As an aerobic exercise SN seemed to be ideal as it involves both static stretching and slow dynamic component of exercise with optimal stress on the cardio-respiratory system.