

Comparison of Various Frequencies of Asanas and Pranayamas Practice on Hemoglobin Concentration of Collegiate Men



Physical Education

KEYWORDS : Asana, Pranayama, Hemoglobin.

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ABSTRACT

Yoga is an ancient science practiced in India over thousands of years. It produces consistent neuro-physiological changes which have sound scientific basis. To achieve the purpose seventy five (N=75) yoga practicing boys selected by static group sampling method, and their age ranged from 19 to 25 years. All are studied at Annamalai University and resident in hostel. The selected subjects are regularly practiced asanas and Pranayamas for a minimum period of one year at yoga center, Annamalai University. They were segregated by their frequency (number of days/week) of yoga practices. Group - I (n=25) 5 sessions/week, Group - II (n=25) 4 sessions/week and Group - III (n=25) 3 sessions/week, each session consist of 75 minutes to 90 minutes. Blood samples were collected and hemoglobin was estimated by Acid Hematin method (4), at Rajah Muthiah Medical College Hospital, Annamalai University, India. The optioned data were treated with ANOVA, if the 'F' value is significant, scheffe's post hoc test was employed to find out the paired mean differences and Pvalue ≤ 0.05 was considered to be statistical significant. The result shows that asanas and pranayamas practice of more session is directly related to the hemoglobin level of men.

INTRODUCTION

Regular physical activity would be important for life's quality even if it had no relationship to disease or longevity. Physical activity is significant in gradient in the quality of life, because it increases hemoglobin concentration levels. Further it promotes physical, mental and psychological well being in addition to conferring health benefits (1). Physically fit children generally have better memory, concentration and energy levels. Yoga is science practiced in India over thousands of years. It produces consistent physiological changes which have sound scientific basis (2). Yoga is one of the best means of self improvement and gaining full potential of body, mind and soul. It has been proved beyond doubt that yoga asanas and pranayamas are very important means for preventing and curing many ailments. Over the last 10 years, research studies have shown that the practice of yoga improves physical quality and many help in control or regulate the blood pressure, respiration, heart rate and hemoglobin level (3). The purpose of the study was to compare the different frequency of asanas and pranayamas practices on hemoglobin concentration among collegiate men.

METHODOLOGY

To achieve the purpose seventy five (N=75) yoga practicing boys selected by static group sampling method, and their age ranged from 19 to 25 years. All are studied at Annamalai University and resident in hostel. The selected subjects are regularly practiced asana and pranayamas for a minimum period of one year at yoga center, Annamalai University. They were segregated by their frequency (number of days/week) of yoga practices. Group - I (n=25) 5 sessions/week, Group - II (n=25) 4 sessions/week and Group - III (n=25) 3 sessions/week, each session consist of 75 minutes to 90 minutes. Blood samples were collected and hemoglobin was estimated by Acid Hematin method (4), at Rajah Muthiah Medical College Hospital, Annamalai University, India. The optioned data were treated with ANOVA, if the 'F' value is significant, scheffe's post hoc test was employed to find out the paired mean differences and $p \leq 0.05$ was considered to be statistical significant.

RESULTS

Table - I

ANOVA OF VARIOUS FREQUENCY ASANAS AND PRANAYAMAS PRACTICES ON HEMOGLOBIN CONCENTRATION

Variables	5 Sessions	4 sessions	3 sessions	Group	Sum of Square	df	Mean Square	'F'
Mean	15.03	15.53	13.16	Between	78.365	2	39.182	25.723*
SD	1.52	1.03	1.08	Within	109.672	72	1.523	

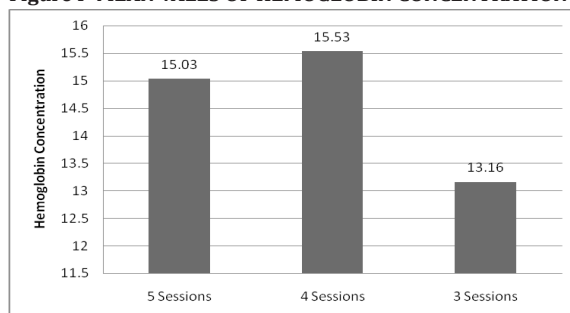
Table Value- 3.13 at $P \leq 0.05$.

Table - II SCHEFFE'S POST HOC TEST FOR THE DIFFERENCE BETWEEN THE PAIRED MEANS

5 Sessions	4 sessions	3 sessions	Mean Differences	n	CI
15.03	15.53	-	0.50		1.05
-	15.53	13.16	2.37*		1.05
15.03	-	13.16	1.87*		1.05

***Significant**

Figure I- MEAN VALES OF HEMOGLOBIN CONCENTRATION



The table-I shows that a significant difference among 5, 4 and 3 sessions of yoga practice on hemoglobin concentration. The table shows that 5 and 4 sessions of asanas and pranayamas practices have no changes on hemoglobin level. But 5 & 3 sessions and 4 & 3 session yoga (asanas and pranayamas) practices have significant difference on hemoglobin concentration in favor of 5 and 4 sessions than the 3 sessions.

DISCUSSION AND FINDINGS

Training with different duration may increase hemoglobin level (5). Evaluate the impact of three week of high altitude training at 2050 m total hemoglobin mass and RBC count increased (6). Living at high, training low the RBC production and hemoglobin concentration level were increased for elite female cyclist (7). Compare hemoglobin of mass and VO_2 max significantly higher for trained and untrained resident of moderate altitude, hemoglobin and VO_2 max significantly higher for trained residents (8). Yoga practices significantly improve hemoglobin levels. Yoga practice improves cell oxygenation by supplying red blood cells richer in hemoglobin without modifying percentage of RBC in the total blood volume and consequently without elevating blood viscosity which is an important cardiovascular risk factors (9). Practicing pranayamas with yoga shows improvement on hemoglobin levels (10).

By considering the above facts, it was concluded that, hemoglobin level linearly increases with sessions of asanas and pranayamas practice.

CONCLUSIONS

The asanas and pranayamas practice of more session is directly related to the hemoglobin level of men.

IMPLICATIONS

Asana and pranayamas will be given to improve the hemoglobin level and used for therapy purpose particularly for anemic and asthma patient.

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