

The Effect Of Selected Yogic Activities And Hepatoglobin Medicine On Hemoglobin For Four Blood Groups

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Abstract:

The present generation engages most of their time with scientifically advanced equipment for their daily routine, resulting in fall and deterioration on their physical health and capacity. Physical activities begun at a young age are more effective in promoting health and longevity than those begun later in life. Hemoglobin is the protein molecule in red blood cells that carries oxygen from the lungs to the body's tissues and returns carbon dioxide from the tissues back to the lungs. Low hemoglobin is referred to many reasons loss of blood, traumatic injury, surgery, bleeding, nutritional deficiency, bone marrow problems, kidney failure etc. The purpose of this study is to know whether selected yogic activities and hepatoglobin medicine do have influence on hemoglobin of different blood groups of High School boys, aged between 13-15 years. For this study 96 subjects were selected. Further they were divided in to four groups, with 24 subjects in each group, such as Yogic group, Medicine group, Yoga+ Medicine group and Control group. The training schedule for yogic activities and medicine are formulated by the help of proficient in yoga and medicine. The pre and post test hemoglobin among the four blood groups are tested in the lab. The data pertaining to criterion were taken before and after the training programme to access the effect of hemoglobin on four blood groups. The statistical technique of Analysis of Co-variance was used, which was followed by Bonferronie's post-hoc test. The study confirmed the hemoglobin among the experimental group has significantly enhanced.

Key words: Hemoglobin, Lab technician, Medicine.

Introduction:

Health cannot be defined as a state at all, but must be seen as a dynamic process of continuous adjustment to the changing demands of living. In spite of its limitations, the concept of health as defined by WHO is broad and positive in its implications. Physical fitness is usually a result of regular physical activity and proper nutrition. The corporal activities that begin at the juvenile age are more effective in endorsing longevity and health than those begun later in life. Some scientific studies have revealed that Yogic activities enhance physical, physiological and psychological performance. Yoga is a science that consists of ancient theories, observations and principles about the body and mind. It's the form of physical activity that provides complete exercise to the entire body and massages all the internal organs and glands. The blood is composed of cells suspended in a liquid like substance. An adult human has about 4-6 liters of blood circulating in the body. A total of 32 human blood group systems are now recognized by the International Society of Blood Transfusion (ISBT). There are four major blood groups determined by the presence or absence of two antigens – A and B – on the surface of red blood cells. Hemoglobin is the protein molecule in red blood cells that carries oxygen from the lungs to the body's tissues and returns carbon dioxide from the tissues back to the lungs. The hemoglobin level is expressed as the amount of grams (gm) per deciliter (dL) of whole blood, a deciliter being 100 milliliters. The normal ranges for hemoglobin depend on the age and gender of the person. A low hemoglobin count is referred to as anemia.

The Purpose Of The Study: The urban area children (especially economically weaker section) are facing various health related problems due to lack of nutritional food, hygienic atmosphere, clean and pure water and adequate physical activities. The yogic activities have gained remarkable charisma all over, because of its therapeutic value as natural medicine.

Methodology:

The subjects are equally divided into four groups, such as Yogic group, Medicine group Yoga + Medicine group and Control group. Before and after the training blood test and hemoglobin content was measured at the lab. Yogic training for the duration of one hour a day, 6 days a week and a period of 12 weeks. 10ml of Hemetoglobin medicine weekly twice that is on Monday and Thursday.

Administration Of Test: Cleanse and lance the finger, lightly press to stimulate blood flow. Fill the cuvette in one continuous process and keep into the cuvette holder immediately. The results will appear in approximately 15-60 seconds. Record the results by writing the name, date and time on the subject's chart.

Results:

The hemoglobin level is expressed as the amount of hemoglobin in grams (gm) per deciliter (dL) of whole blood, a deciliter being 100 milliliters.

Analysis Of The Data And Result: Analysis of Covariance (ANCOVA) statistical technique was used to find out significant difference in means among four groups. Graphical representation of mean in pre-test, post-test and adjusted (for pre-test) were done using multiple bar plots. To tease out the source of significant difference if any, in the previous step, the Bonferroni's post-hoc test was carried. Profile plots were plotted. The following tables and figures illustrate the statistical results.

Table – 1

DESCRIPTIVE STATISTICS FOR FOUR BLOOD GROUPS

Group	N	Tests	Min	Max	Mean	Std. Error (mean)	Std. Dev
O+	32	Pre	9.00	13.80	12.02	.218	1.233
		Post	10.90	15.80	13.80	.234	1.325
A+	29	Pre	9.90	14.20	12.09	.164	.882
		Post	11.50	16.30	13.82	.244	1.312
B+	31	Pre	9.80	13.90	12.35	.169	.945
		Post	11.60	15.80	13.92	.219	1.221
AB+	4	Pre	11.90	12.10	12.00	.057	.115
		Post	12.20	15.80	14.30	.878	1.757
Total	96	Pre	9.00	14.20	12.15	.104	.132
		Post	10.90	16.30	13.87	.131	1.288

The table-1 reveals the descriptive statistics of hemoglobin for four blood groups. The minimum (min) hemoglobin in post-test is higher in four blood groups, when compared with pre-test. The maximum (max) hemoglobin in post-test is greater than pre-test in the respective groups. The Std. Error (of mean) and Std. Deviation are also high in the post-test when compared to the pre-test in the respective groups.

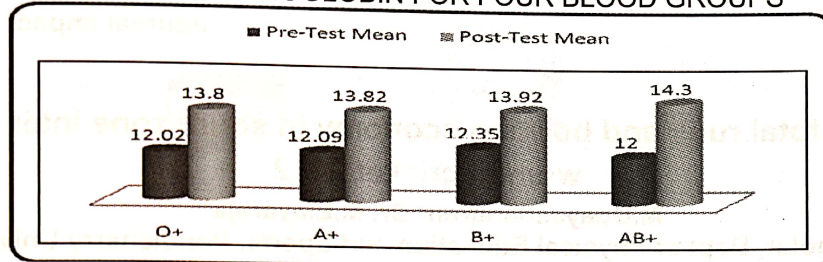
Table – 2

MEAN SCORES OF HEMOGLOBIN FOR FOUR BLOOD GROUPS

Group	Pre-Test Mean	Post-Test Mean	Adjusted post-test Mean
O+	12.02	13.80	13.79
A+	12.09	13.82	13.90
B+	12.35	13.92	13.84
AB+	12.00	14.30	14.38

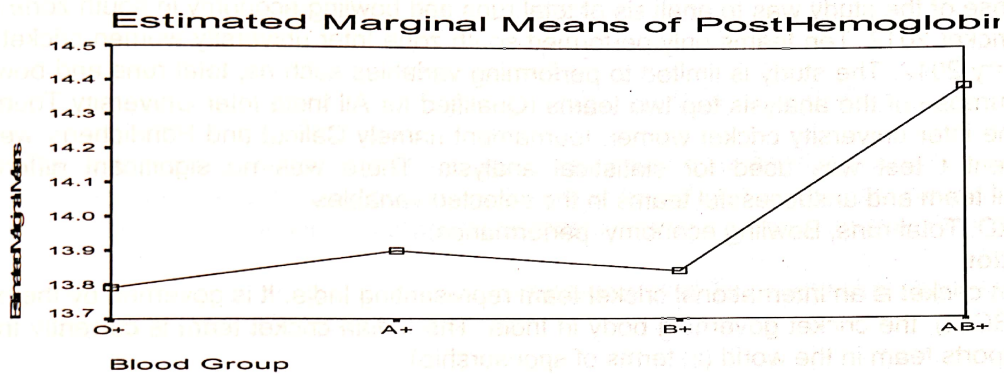
The table -2 describes the pre, post and adjusted mean of hemoglobin among the four blood groups.

Figure – 1
 MULTIPLE BAR PLOT MEANS OF HEMOGLOBIN FOR FOUR BLOOD GROUPS



The mean scores in the table-2 are represented graphically in the multiple bar plot in figure-1.

Figure – 2
 PROFILE PLOT ESTIMATED MARGINAL MEANS OF HEMOGLOBIN FOR FOUR BLOOD GROUPS



The profile plot in the figure-2 shows the increase in the adjusted post-test mean in AB+ & A+ group when compared to B+ & O+ blood groups.

Discussion and Conclusion of the study:

The findings of the study shows that, the hemoglobin has significantly improved in AB+ & A+ blood groups when compared with B+ & O+ blood groups, in pre and post-test due to the influence of twelve weeks of yogic training and hemetoglobin medicine. The results have been shown in table 1&2 and figures 1&2. Because yogic exercises boosts circulation of blood and improve functioning of the entire circulatory system and develops cardio-respiratory efficiency. Regular practice of yoga and pranayama increases the RBC production as well as purifies the blood. Virtually the medicine also influence on increase of hemoglobin. The finding was however in conformity with previous studies reported by; Sanugam (1993) studied the effect of asana and jogging on selected physiological and hematological variables among school boys.

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