Research Paper Physical Education

Effect of Yogic Asana and Pranayam on White Blood Corpuscles of Female

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ABSTRACT

Introduction: Evidence suggested that exercise may affects level of white blood corpuscles. Participation in exercise may increase1 level of White Blood Corpuscles and also may decrease2 level of White Blood Corpuscles and not only that published works demand that there is no effect3,4 of exercise on level of White Blood Corpuscles. In this context the researcher intend to know whether exercise affects positively or negatively or not on the level of White Blood Corpuscles. **Aim:** Determine whether participation in exercise may increase the level white blood corpuscles or not. **Method:** Only two female subjects mean aged 29 years were participating in this study. They were regularly practice yogic asana and pranayam for 1 hour per day in the evening, 6 days per week and for 8 weeks. The level of White Blood Corpuscles was assessed by examination of blood (Hematology). In the present all the measurements were done at base line and 8 weeks of exercise training. Simply percentages were calculated for increase or decrease or no change in level of White Blood Corpuscles and change of the mean value to see the quantitative changes in White Blood Corpuscles due to participation in the exercise training. **Result:** Pre-test mean of WBC was 8050 and post-test was 8900 which imply that 10.55 % increase in level of WBC which was significant at 0.05 levels. **Discussion and conclusion:** It may be concluded that exercise may changes the level of What Blood Corpuscles.

KEYWORDS Yogic Asana; White Blood Corpuscles.

Introduction: It is already established that exercise may affects White blood corpuscles. Participation in exercise may increase[1] level of white blood corpuscles. On the other hand few researcher were shown exercise may give sharp decrease in level of white blood corpuscles.[2] Not only that published work established that there is no effect of exercise on level of white blood corpuscles.[3,4] In this context the researcher intend to know whether exercise affects positively or negatively or not on the level of White blood cell. **Aim:** Determine whether participation in exercise may increase the level of White blood Corpuscles. **Method:** Only two female subjects mean aged 29 were participates in this study. They were regularly practice yogic asana and pranayam for 1 hour per day in the evening, 6 days per week, for 8 weeks. The level of white blood corpuscles were assessed by blood test (Hematology-ELISA). **Result:** Pre-test White Blood Cell level was 8200/cu.mm and post-test WBC level was 8700/cu.mm. in case of subject-1 which implies that the 6.09% increase of WBC significantly at 0.05 level, pre-test Nutrophil was 70% and post-test Neutrophil was 67% which imply decrease 4.28%. Pre-test Lymphocyte was 26% and post-test Lymphocytes 30% which imply 15.38% increase. Pre-test Eosinophil was 3% and post-test Eosinophil was 2% which imply 33.33% decrease. No effects of Monocytes and Basophil in subject-1. In case of subject-2 same trends was shown that is pre-test WBC level was 7900/cu.mm and post test WBC level was 9100/cu.mm which implies that 15.18% increase in WBC significantly in which pre-test Neutrophil was 69% and post-test Neutrophil was 68% which implies 1.44% decrease. Pre-test Lymphocyte was 20% and post-test Lymphocyte was 28% which implies 40% increase. Pre-test Eosinophil was 9% and post-test Eosinophil was 3% which implies 66.66% decrease. Pre-test Monocytes was 2% and post-test Monocytes was 1% which implies 50% decrease. No effects on Basophil were found because there was no basophil in both subjects.

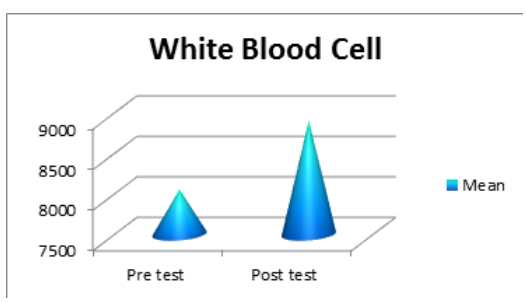


Fig. no. 1: Comparison of Pre-test and Post-test Mean of WBC.

Table no. 1: Mean of WBC level.

	Pre test	Post test	% increased
Subject 1	8200	8700	6.09
Subject 2	7900	9100	15.18
Mean	8050	8900	10.55

Fig. no. 2: Comparison of Pre-test and Post-test Mean of Neutrophil.

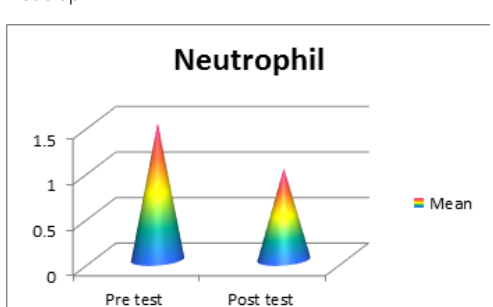


Table no. 2: Mean of Neutrophil level.

	Pre test	Post test	% decreased
Subject 1	70	67	4.28
Subject 2	69	68	1.44
Mean	69.5	67.5	2.28

Fig. no. 3: Pre test and post test mean of Lymphocyte.

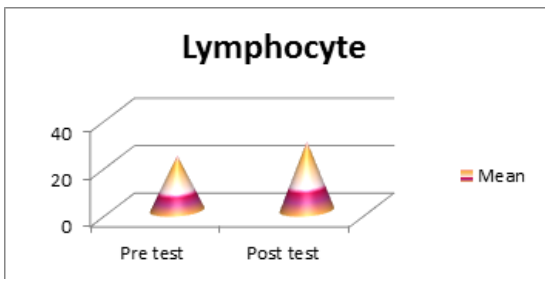


Table no. 3: Mean and Percentage of Lymphocyte.

	Pre test	Post test	% increased
Subject 1	26	30	15.38
Subject 2	20	28	40
Mean	23	29	26.08

Fig. no. 4: Comparison of Pre-test and Post-test Mean of Eosionophil.

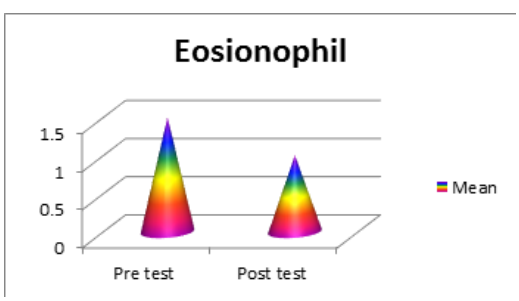


Table no. 4: Mean of Eosinophil level.

	Pre test	Post test	% decreased
Subject 1	3	2	33.33
Subject 2	9	3	66.66
Mean	6	2.5	58.33

Fig. no. 5: Comparison of Pre-test and Post-test Mean of Monocytes.

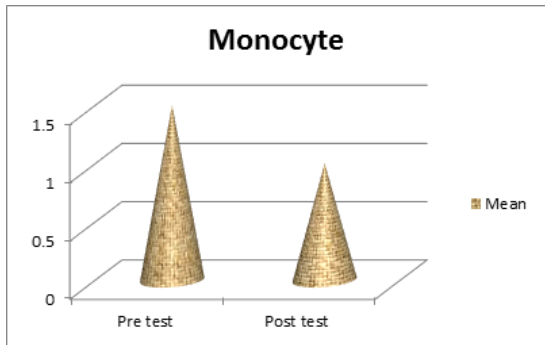


Table no. 5: Mean of Monocytes level.

	Pre test	Post test	% decreased
Subject 1	1	1	0
Subject 2	2	1	50
Mean	1.5	1	33.33

N.B. No Besopjil found in subject-1 and subject-2 in pre-test and post-test level.

Exercise practice protocol for eight weeks						
Events	Variation	Duration	Repetition	Recovery	Volume	Total time
Utthita padmasana	Left leg inner side	30 sec.	2	30 sec X²	1.00min	2.00min
	Right leg inner side	30 sec	2	30 sec X²	1.00min	2.00min
salvasana	No variation	30 sec.	2	30 sec X²	1.00min	2.00min
uthkatasana	No Variation	30 sec.	2	30 sec X²	1.00min	2.00min
Baisistasana	1.	30 sec.	2	30 sec X²	1.00min	2.00min
	2.			30 sec X²	1.00min	2.00min
Janusirasana	1.	30 sec.	2	30 sec X²	1.00min	2.00min
	2.	30 sec.		30 sec X²	1.00min	2.00min
Ardha chakrasana	No variation	30 sec.	2	30 sec X²	1.00min	2.00min
Dandasana	No variation	30 sec.	2	30 sec X²	1.00min	2.00min
Dhanurasana	No variation	30 sec.	2	30 sec X²	1.00min	2.00min
Padahastasana	No variation	30 sec.	2	30 sec X²	1.00min	2.00min
Ustrasana	No variation	30 sec.	2	30 sec X²	1.00min	2.00min
Ardha Masyendrasana	1	30 sec.	2	30 sec X²	1.00min	2.00min
	2	30sec	2	30 sec X²	1.00min	2.00min
Birvadrasana	1	30 sec.	2	30 sec X²	1.00min	2.00min
	2	30sec	2	30 sec X²	1.00min	2.00min
Barrasana	No variation	30 sec.	2	30 sec X²	1.00min	2.00min
Nukasana	No variation	30 sec.	2	30 sec X²	1.00min	2.00min
Natarajasana	1	30 sec.	2	30 sec X²	1.00min	2.00min
	2	30sec	2	30 sec X²		
sovasana		60 sec.	1	nil	1.00min	1.00min
Pranayama		-	1	nil	nil	15min
Om chanting	01 OM…….	10 sec.	1	10sec XI	.10min	.20min
	02 OM……..	10sec.	1	10sec XI	.10min	.20min
	03Om……..	10sec.	1	10sec XI	.10min	.20min
Total time =						60 min

Conclusion: It may be concluded that exercise may increase the level of what blood corpuscles may be due to increase in Lymphocyte.

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