

## RECIPROCITY OF NORMAL BLOOD OXYGEN LEVEL ALONG DUST ALLERGY

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### ABSTRACT

Objective of the current study was to relate the normal blood oxygen level along dust allergy. Number of subjects was 200 who took part in this project. In this study total subjects checked their blood oxygen level and they wrote their normal blood oxygen level in the question; they are affected by the dust allergy or not. The question was to check the relation of oxygen of blood and allergy. Conclusion was that the males are less affected by the dust allergy with higher blood oxygen level as compared to the females which have little bit low blood oxygen level. Generally more people are not affected by the dust allergy including both males and females.

**Keywords:** red blood cells, oxygen level, hemoglobin

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**No: of Tables : 1**  
**10**

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## INTRODUCTION

Quantity of oxygen in red blood cells is known as oxygen level. Blood oxygen level is regulated by body. Oxygen is most important for life in which cardiovascular and respiratory systems are involved. Ventilation and transportation of gases is done for the oxygenation of blood. Firstly blood passes through the lungs, hemoglobin takes oxygen because oxygen level raises in the lungs capillaries and then it is released in that area of the body or tissues where oxygen level is lower. When sufficient oxygen is take in the body, respiration is normal but when the oxygen level is low respiration rate becomes high. Oxygen from the atmosphere is taken by the heart and lungs which is helpful in the generation of flow of oxygenated blood to the tissues for the maintenance of metabolism. This system allows the transportation of oxygen through the extravascular tissue matrix. Blood oxygen is the relation of hemoglobin to the oxygen-saturated hemoglobin in the arterial blood to check the oxygen status in the body.

People who are affected by dust allergy are familiar with sneezing which is not a comfortable symptom. Dust allergy can be due to the dust at home which may contain the hair of pets, it may be the pollen spores and the dust mites or the body parts of the cockroaches. Dust mites live in warm places. 70 degrees or above it is preferable temperature. 70- 75% humidity is needed with Fahrenheit. Below 50% can cause the death of the dust mites. The common cause of asthma in children is dust mites. Asthma is a disease which occurs in the branches of

the bronchial tubes. Allergic asthma is a type of asthma which occurs by the mold or spores. Household humidity should be minimized and mask should be used during cleaning.

Objective of the present study was to co-relate dust allergy with blood oxygen level.

## MATERIALS AND METHODS

In the measurement of blood oxygen an instrument is used which measures accurate blood oxygen level. Index finger is put in pulse oximeter and blood oxygen level is measured in this way. Blood oxygen level can be figured by:

$$SpO_2 =$$

$$\frac{HbO_2}{HbO_2 + Hb}$$

A question was according to the allergy related to the blood oxygen level. Total 200 subjects participated in this project. Those all were the students of Bahauudin Zakariya University, Multan, Pakistan. Those students wrote their blood oxygen level in the question either they are afflicted by allergy or not.

## STATISTICAL ANALYSIS

Statistical analysis was achieved by using MS visio. *t*-test was performed to resolve the results of *p* value which is less than 0.05. This value is significant.

## RESULT AND DISCUSSION

Correlation of blood oxygen with dust allergy is in this table 1. A questionnaire based studies have given essential outcome in this research. In this research there were some students who were male and they have dust allergy and their average blood oxygen level is 96.15 with SD 5.74 and the males which are not affected by the dust allergy have average blood oxygen level is 97.42 with standard

deviation 2.23. On the opposite side where females have dust allergy, their normal blood oxygen level is 95.89 with SD 4.74 while the females which are not affected by the dust allergy have normal blood oxygen level is 96.22±5.22. in this way total subjects which have dust allergy including both males and females have normal blood oxygen level is 96.02 with SD 5.008, while the subjects which are not affected by the dust allergy have normal blood oxygen level is 96.75 with standard deviation 4.42.

**Table #1: correlation of blood oxygen (mean ± SD) with dust allergy is in the table.**

GENDER	HAVE DUST ALLERGY	NO DUST ALLERGY	p- VALUE
MALE	96.15±5.74	97.42±2.23	0.247
FEMALE	95.89±0.73	96.22±5.22	0.736
BOTH	96.02±5.008	96.75±4.42	0.319

Non - significant ( $p>0.05$ ) ; Questionnaire based studies were given important in current researches (3-10)

## CONCLUSION

Outcome of the present study is that the males are less affected by the dust allergy with higher blood oxygen level as compared to the females which have little bit low blood oxygen level. Generally more people are not affected by the dust allergy including both males and females.

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