

## Is there any effect of blood oxygen level on nail biting?

Muhammad Imran Qadir, Hira Naeem Qureshi<sup>\*,1</sup>

*Institute of Molecular Biology and Biotechnology, Bahauddin Zakariya University, Multan, Pakistan*

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Daniel V

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### ABSTRACT

To correlate pulse rate with nail biting is the aim of current research. 200 subjects took part in current research, where their blood oxygen level calculated. The normal blood oxygen level was between 80 to 100 millimeters of mercury (mm Hg). It was concluded from the current research that blood oxygen level has no effect on nail biting.

**Key words:** blood oxygen–pulse oximeter–nail biting

### 1 INTRODUCTION

Blood oxygen level is the how much red blood cell carrying oxygen. The blood oxygen level are regulated by body and it is important to maintained blood oxygen level. The normal oxygen level are in between 80 to 100 millimeters of mercury (mm Hg) in the blood. The chronic disease patients needed to control their blood oxygen level. The blood oxygen level are determined by arterial blood gas (ABG) and pulse oximeter. The blood oxygen calculation are also known as oxygen saturation level. The low oxygen level in the blood is known as hypoxemia. The people who take oxygen supplements have higher blood oxygen level. The headache, shortness of breath, rapid heartbeat and chest pain are the symptoms of higher blood oxygen level while the cyanosis are due to low blood oxygen level [1]

The onychophagia is also called nail biting. The process of chewing nail by using teeth is called nail biting. It mostly occur in children almost 43% children during age of puberty doing nail biting. The nails are built within nail bed. It takes a chance of infections. The loneliness, anxiety, inactivity, stress, depression, poorly manicured nails, heredity are the causes of nail biting. The nail biting causing destruction of the base of nail. The nail biting is cured but it is not easy. It has not been cured by psychology and medicines. The germs once enter into the body through fingernails it caused the serious infections. The nail biting is maximum in children and adolescence while it is lesser in adults. Due to the nail biting the growth of nail are reduced. The cheap and mostly used treatment for nail biting is applying nail polish on the nail [2]

The aim of the current study was to associate blood oxygen level with nail biting.

### 2 MATERIALS AND METHODS

There are 200 subjects that took part in present research. All subjects were students of Bahauddin Zakariya University, Multan, Pakistan.

The pulse oximeter device used to measure the blood oxygen level. First we placed the pulse oximeter device on the finger of hands. The pulse oximeter has a beam of light that pass into blood and calculate the oxygen level in blood. The oxygen level in blood is determined by the given formula

The Hb is abbreviated as deoxygenated hemoglobin and HbO<sub>2</sub> is abbreviated as oxygenated hemoglobin.

#### 2.1 Statistical Analysis

Statistical analysis determined by M excel. Student's *t*-test was operate determined conclusion of *p* value. The *p*<0.05 are deliberate as significant.

### 3 RESULTS AND DISCUSSION

Effect of blood oxygen level on nail biting is given in table 1. The normal oxygen level in body is 80 to 100 millimeters of mercury (mm Hg). The increasing and decreasing in oxygen level are due to many reasons. The symptoms of low oxygen in body are cyanosis. The increasing of oxygen level has symptoms of headache, shortness of breath, rapid heartbeat and chest pain. Out of 200 subjects the 59 males have habit of nail biting with mean 94.76 and standard deviation 5.52 while the 141 male have lesser habit of nail biting with mean 96.89 and standard deviation 4.56. The 28 female have habit of nail biting with mean 94.53 and standard deviation 6.14 while 113 female have lesser habit of nail biting with mean 95.53 and standard deviation 9.27. The 41 subjects have habit of nail biting with mean 94.60 and standard deviation 5.95 while 159 subjects have habit

\* Email: : [hiranaeem2306\(at\)gmail.com](mailto:hiranaeem2306(at)gmail.com)

of nail biting with mean 96.18 and standard deviation 6.28. A questionnaire based studies have been given important outcome in current researches [3–10]

**Table 1. Effect of blood oxygen level (Means ± SD) on nail biting**

Gen-der	People who bite their nails	People who don't bite their nails	p value
Male	94.76±5.52	96.89±4.56	0.23
Fe-male	94.53±6.14	95.53±9.27	0.49
Both	94.60±5.95	96.18±6.28	0.14

Non Significant  $p > 0.05$

#### 4 CONCLUSION

It was concluded from the current research that blood oxygen level has no effect on nail biting.

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#### AUTHOR BIOGRAPHY

**Muhammad Imran Qadir** Institute of Molecular Biology and Biotechnology, Bahauddin Zakariya University, Multan

**Hira Naeem Qureshi** Institute of Molecular Biology and Biotechnology, Bahauddin Zakariya University, Multan, Pakistan