

# Interaction of normal blood oxygen to dimples

## Abstract

The purpose of current study was to analyze any relation among dimples and normal blood oxygen level. Blood oxygen level is actually the quantity of oxygen in our blood. Pulse oximeter is used to measure blood oxygen level of a person. It is a clip that we put on a finger, ear or toe. It indirectly measures blood oxygen level of a person by light absorption. Oxygen level of blood in between 75- and 100-mm Hg is considered as normal. Dimple is a small hollow area on our body most noticeably shown on cheek and chin when a person makes some expressions of face. Researchers conclude that it is a dominant and genetically inherited trait but some conclude that it is irregular dominant trait that is controlled by one gene or may influenced by other genes. We measure blood oxygen levels of different subjects by pulse oximeter by clipping this device on their fingers and asked them whether they have dimple on their face or not? Then to correlate dimples and blood oxygen levels we made two lists. Total 200 subjects contributed in this activity and these subjects were students at Bahauddin Zakariya University Multan, Pakistan.<sup>1-3</sup>

**Keywords:** Dimples, Blood oxygen level, Peripheral oxygen saturation

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## Introduction

Blood oxygen level is actually the quantity of oxygen in our blood. Blood oxygen level is also known as peripheral oxygen saturation. Red blood cells carry oxygen by collecting it from lungs and transport it to all body parts. There must be enough oxygen in the blood because every cell of our body needs oxygen.<sup>4</sup> Our body continuously check oxygen level of blood and maintain it in a specific range. Arterial blood gas (ABG) test is an effective way to monitor blood oxygen levels. A sample of blood is taken from an artery to check oxygen level. This procedure is painful but accurate so we use another test by using a small device called as pulse oximeter. It is a clip that we put on a finger, ear or toe. It indirectly measures blood oxygen level of a person by light absorption. Pulse oximeter is quicker, easy to use and not painful but not accurate as ABG test. It is influenced by different factors like bright lights, nail polish and dirty finger. Blood oxygen level between 75- and 100-mm Hg is considered as normal. When oxygen level of blood is less than 60 mm Hg, it is known as low or this condition is known as hypoxia and hypoxemia.<sup>5</sup> The symptoms of low blood oxygen levels like breath shortness, rapid increase in breathing, pain in chest, increase in blood pressure, rapid heartbeat and confusion. This condition is caused when does not have enough oxygen than lungs fail to inhale or send oxygen or inability of blood stream to circulate oxygen properly. People have to see a doctor when they feel sudden or severe shortness of breath in rest. Dimple is a small hollow area on our body most noticeably appear on cheek and on chin when a person makes some face expression. On the basis of their presence there are two types dimples, chin and cheek dimples. Cheek dimple appear by making a facial expression but chin dimple appears without making any facial expression. They appear or disappear for an extended period of time. Researchers conclude that it is a dominant and genetically inherited trait but some conclude that it is irregular dominant trait that is controlled by one gene or may influenced by other genes.<sup>6</sup> This genetic defect cause irregular growth of certain facial muscles during embryonic development. They are formed on face by structural variation of zygomaticus major muscle. Appearance of double zygomaticus muscle form cheek dimples. When we smile a muscle is shortened that is responsible for stretching or pulling our lips behind into corners. Dimples appear in those persons having

dominant dimple gene. There is a 50 percent probability of dimples in next generation if mother and father both have dimples. Dimples are too attractive so many people want that they could have dimples. Different methods are used to reduce their size but it is impossible to remove them permanently. The purpose of our current study was to analyze any relation among dimples and normal blood oxygen level.

## Materials and methods

### Project designing

Firstly, we take consent from each subject to measure their blood oxygen levels. Then we measure blood oxygen levels of different subjects by pulse oximeter by clipping this device on their fingers and asked them whether they have dimple on their face or not? Then to correlate dimples and blood oxygen levels we made two lists. One list containing blood oxygen levels of those subjects having dimple on their face and the other list contain blood oxygen levels of those subjects who do not have any dimple. Total 200 subjects contributed in this activity and these subjects were students at Bahauddin Zakariya University Multan, Pakistan.<sup>7</sup>

### Statistical analysis

Statistical analysis was done by Microsoft Excel and t test was used to evaluate the results.

## Result and discussion

Table 1 shows the mean of normal blood oxygen level of subjects with standard deviation and their *p* value. The blood oxygen level of male subjects is 98 which is greater than female subjects 94.3 having dimple on their face and blood oxygen level of males 96 is less than females 96.4 not having dimples. Last row in the table shows blood oxygen level of all subjects including males and females is 96.4 having dimples and blood oxygen level of all subjects including males and females is 95.5. Last column shows *P* value of males 0.06, females 0.12 and both males and females combined 0.29 which are non significant because *p* is greater than 0.05. A questionnaire was prepared to check the relation of normal blood oxygen level to dimples.<sup>8-10</sup>

**Table 1** Connection of normal blood oxygen (Mean±SD) with dimples.

Gender	Having Dimples	Not having Dimples	P value
Male	98±1.9	96±5.4	0.06
Female	94.3±6.6	96.4±3.4	0.12
Combined	96.4±4.9	95.5±5.1	0.29

( $P > 0.05$  hence  $p$  considered as non-significant)

## Conclusion

Our present study concluded that there is not scientific relation between normal blood oxygen level and dimples because  $P$  is greater than 0.05 and result is non significant.

## Acknowledgments

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## Conflicts of interest

The author declares there is no conflict of interest.

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