

## Relation of Earlobes with Pulse Rate

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### ABSTRACT

Objective of present study was to correlate normal pulse rate with earlobes. A total of 200 subjects participated in study. The subjects were students in Bahauddin Zakariya University, Multan, Pakistan. Pulse rate of subjects was calculated. A questionnaire was made about the relation of earlobes with normal pulse rate. We asked subjects whether they had joint earlobes or free earlobes. They answered the question by using pulse counts according to the presence of attached or free earlobes in their relevant column. It was concluded from the present study that there is no significant relation of earlobes with normal pulse rate because p value was higher than significant value.

**Keywords:** Earlobes, Significant value, Pulse rate

### INTRODUCTION

According to medicine, a pulse is examining the systolic blood pressure through sense of touch by trained person or observer. Sphygmology is a term that deals with the study of pulse. The pulse can be examined by touching it in any place. This allows the compression of arteries near the surface of body parts like wrist (radial artery), groin (femoral artery), neck (carotid artery), close to the ankle joint (tibial posterior artery) and foot (dorsally pedis artery). Pulse is equal to the degree of heart rate. Pulse rate is commonly checked by using three fingers. These three fingers are close to heart and middle finger is used in the estimation of blood pressure. Pulse rate can also be determined by connecting the oscillators to catheters of arteries. Since 1970, intensive care has been using this determination technique. Other methods of determination can be observance under absorbance of light of varying wavelengths. Depending upon the physiologic conditions, heart rate can be less or more than pulse rate. Pulse rate may be used to find the fitness and health of heart. Pulse rate is observed and recorded as beats per minute (1-2). Earlobe is defined as rounded and soft fleshy descending from the lower end of the ear. Earlobes are composed of hard connective tissues. There are two types of earlobes. One is attached earlobe and other type is free earlobe. Attached earlobes are those which are directly connected to the side of head. Free earlobes are those that descend down farther the attachment point. On the basis of genetics, trait is controlled by a single gene. Free lobes are due to dominant effect while attached earlobes are considered due to the presence of recessive trait. Most of the people have free earlobes as compared to attached earlobes.

About 99% people have unattached or free earlobes while 1% people have attached earlobes according to a survey. Earlobes can also help to determine the personality of an individual. Not any major biological function is performed by earlobes. Wearing nickel earrings can cause earlobes to bleed and swell. Earlobes help in keeping the ears warm because earlobes do not have cartilage.

Objective of present study was to correlate normal pulse rate with earlobes.

## MATERIALS & METHODS

A total of 200 subjects participated in study. The subjects were students in Bahauddin Zakariya University, Multan, Pakistan.

Here is the protocol for the measurement of pulse rate which we used for counting the normal pulse rate. By measuring our pulse, we can measure our heart rate. We placed two fingers against our wrist gently and did not use thumb. Then we counted normal pulse rate for 1 min.

A questionnaire was done about the relation of earlobes with normal pulse rate. We asked subjects whether they had joint earlobes or free earlobes. They answered the question by using pulse counts according to the presence of attached or free earlobes in their relevant column.

### Statistical analysis

Statistical analysis was done by M stat and student *t*-Test was used to analyze the result.

$P < 0.05$  was considered as significant.

## RESULTS & DISCUSSION

Relation of earlobes with pulse rate is given in Table 1-3. According to results, subjects including males and females with average 89.00 said they had free earlobes while subjects with average 79.20 said they had attached earlobes. Subjects with free earlobes were more while subject with attached earlobes were less. Then *p* test was done to check the significant value and *p* value was 0.71 which was greater than significant value and there was no relation of earlobes with pulse rate among females and males. Then average of females 79.81 said they had attached earlobes was greater than females with average 78.22 said they had free earlobes but *p* value was 0.66 greater than significant value and there was no relation of normal pulse with earlobes among females. Average of males 79.41 said they had free earlobes was greater than average 79.18 said they had attached earlobes. *p* value was 0.95 greater than significant value which showed there was no relation of pulse rate with normal pulse rate among males.

**Table 1:** Relation of earlobes with pulse rate among females and males

Attached earlobes	Free earlobes
79.20 ± 12.00	89.00 ± 11.63

Results were non-significant ( $p < 0.05$ )

**Table 2:** Relation of earlobes with pulse rate among females

Attached earlobes	Free earlobes
79.18 ± 11.35	78.22 ± 11.98

Results were non-significant ( $p < 0.05$ )

**Table 3:** Relation of earlobes with pulse rate among males

Attached earlobes	Free earlobes
79.22 ± 13.31	79.41 ± 10.67

Results were non-significant ( $p < 0.05$ )

Questionnaire based studies have given an important advancement in recent researches (3-10). Sang In Choi and Hee Cheol Kang did research about the relation of earlobe crease with heart diseases. Normal earlobe was smooth while crease earlobe had a fold, wrinkled or straight line and earlobes cut in half. Earlobes crease was possible sign of coronary artery disease and this was later called as frank's sign (according to Dr. Sanders T.Frank). This was also linked with the presence other risk factors like smoking and blood pressure. Different companies used sensors for accurate measurement of heart rate by measuring pulse rate.

## CONCLUSION

It was concluded from the present study that there was no significant relation of earlobes with pulse rate among females and males because  $p$  value calculated by  $t$ -test was higher than significant value.

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