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Is There any Correlation Between Pulse Rate and Premature Greying of Hair?

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Abstract

Heart rate or pulse rate is actually the number of heart beats in 60 seconds. The normal range in adults is 60 to 100 beats/minutes. Heart rate fluctuates due to many reasons like exercise, during sleep, emotions of stress and fear effects the pulse rate. This chronic imbalance in heart beats sometimes leads to cardiovascular diseases. Premature greying or canities happens in early ages due to several genetic factors. As the mutation in Pax 3 gene cause the reduction in the production of pigments that leads to rough and grey hair. Follicular melanogenesis cause decrease in pigmentation and cause grey hair in early ages. Different dyes can be used to temporary color the hair and hide the white hair, but this also damage the hair. This research was established to investigate the relation between these two factors. The pulse rate of almost 200 students was recorded and observed. It was concluded that there is not any relation between grey hair and pulse rate.

Key Words: Pulse rate, Premature greying, Pax-3 gene

Introduction

Pulse rate is denoted as heart rate of any individual. It can be precisely defined as how many times heart beats in one minute. Mayo clinic proposed the normal heartbeat rate in children that is 70-100 bpm and in adults is 60-100 bpm. The heart rate depends upon the body size, age, medication and environmental condition. (Gillum, Makuc, & Feldman, 1991) Emotions also influence on the pulse rate as excitement and fear can increase the rate of heart. It can also be change by physical activities like sleep, exercise, stress and by taking drugs. The normal heart rate is essential for health. (De Haan & Jeanne, 2013) The alteration in this pulse rate reflect the disturbance in cholesterol level of the body. That sometimes may often lead to cardiovascular diseases and heart attack. Electrocardiographs or ECG is an authentic method to know the heart rate of the any individual. (Schäfer & Vagedes, 2013). Premature greying of hair initiates in early ages. There are several reasons behind this happening. The most important factors that cause whitening of hair is the quality of water and diet of youngsters. Its impact great dishearten effect in the personality of the effected persons.There are also genetic factors that are involved in this. Mainly a gene named as Pax 3 is controlling the function of melanocytes. The defect in these genes causes the abnormal function of melanocytes that are usually take part in hair pigmentation. (Beardsworth, Kearney, Steel, Newman, & Purdie, 1999) Emotional stress and the deficiency of vitamin B12 and vitamin D stimulates the greying. To avoid this problem one should use antioxidants in order to protect hair from photo rays. Moreover, different hair dyes can be used to reduce the greying of hair. (Hill, 1980)

Study Objectives

The goal of this investigation is to find the relation between pulse rate and premature greying.

Materials and Methods

Firstly, the students of university were selected to check their pulse rate and ask them a question about variable to identify either they have premature greying or not. We use radial pulse method to check the heartbeat rate. This involves three basic steps.

- Place the middle and index finger of left hand on the right arm just below the thumb to recognize the radial artery
- Once you find the artery then look on the clock in order to notice time.
- And start to count the number of heart beats in 60 seconds.
- Avoid using thumb for counting because it can cause hurdle in counting so always use pointer or middle finger.

Results and Discussion

Almost 200 students were selectedincluding both male and female students of University. Table 1 shows that there were approximately 54% female students that having greying in early age while there were40% male that have canities. But only5% male shows abnormal heart rate while all female represented the normal pulse rate. These results denoted that there might be no significant relation between canities and premature greying of hair.

Table 1: The relation of Pulse rate with Premature Greying of Hair

GENDER	Premature greying of hair	NO Premature Greying of hair	
	Mean± SD	**Mean± SD**	**P value**
Female	**76.66 ± 8.9**	**75.87± 9.3**	**0.8**
Male	**82.94 ± 7.6**	**79.4±7.2**	**0.5**
Both	**78.5± 7.9**	**77.3± 8.2**	

Conclusion

There is no relation between variable of premature whitening of hair and pulse rate of individuals.

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