

Relationship of Age on Lung Vital Capacity

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ABSTRACT

This research was conducted to Determine the relationship of age on the vital lung capacity. An unknown problem is the unknown relationship of Age on Vital Lung Capacity at eagle Soccer School Padang. The sample of this study was Carried out on 16 Eagles FC Soccer athletes. The method used in this study is the correlation method. Selected variables and experimental research designs. The experimental design is presented in the form of a correlation research so that it can provide an idea to test the effectiveness of the treatment. The results of this study from the output can be known the value of $r_{count} = 0.385 < r_{table} = 0.497$ with a significance value of $0.141 > 0.05$, the which means there is no significant relationship (significance) variable X (Age) to the research variable (KV).

Keywords: Age, Vital Lung Capacity, Soccer Athlete

1. INTRODUCTION

Lung vital capacity is the maximum volume of air the lungs at the time of entry and out of the lungs during the breathing cycle, namely at the time of maximal inspiration and maximal expiration. Lung vital capacity development describes the ability of the lungs and chest cavity. Lung vital capacity lungs ability to hold oxygen in the measurement can be done by way of inspiration and expiration as possible. Kapasitas vital lung capacity greater then the oxygen will also be more and more.

Lung capacity can be divided into two: 1) The total capacity is the amount of air to fill the lungs at the time of maximal inspiration, 2) Vital capacity is the amount of air that can be issued after a maximal expiration. Irzaldy, Wiyasihati, and Purwanto (2015) there are several factors that can affect the measurement of vital capacity of lungs in humans is posture, age, gender, physical, pregnancy, and physical training.

Age. lung function increased 20-fold during the first 10 years of human life then man then resumed rapidly during adolescence and begins to decrease in adulthood onwards. age is an important variable in terms of occurrence of pulmonary function impairment and associated with the development of the organs of the body over time one lung organs that affect vital lung capacity of a person.

The tool used to measure the vital capacity of the lungs is spirometry. Spirometry is a simple tool used to measure the volume of air in the lungs. Spirometry can be used to evaluate and monitor diseases associated with heart and lung disease that spirometry

examinations routinely used in hospitals to patients and lung or heart disease.

the level of awareness of physical activity which is very important for human health is still very low. So

2. METHODS

Quantitative research by looking at the correlation of age on the vital capacity of the lungs. That focus on the relationship of age to the vital lung capacity. Samples are Rajawali FC soccer athlete of 16 people. The sampling technique is done purposive sampling. Sugiyono 2008 at Prasiwi (2014) purposive sampling is sampling techniques to determine certain criteria. Data were analyzed using SPSS version 17. The purpose of this research is to know whether there is a significant relationship between age and vital lung capacity.

3. RESULT AND DISCUSSION

A. Result

Based on results of data analysis using SPSS version 17 above, note the value of $r_{count} = 0.385 < r_{table} = 0.497$, And a significant level of $0.141 > 0.05$, which means there is no real relationship (significance) Variable X (age) to variable participation (KV). Besides age, vital lung capacity can be influenced by other factors such as: 1) Gender. Lung capacity 20% -25% of women are smaller than men lung capacity, and will be even more vital capacity value parupada sportsmen and people who were big. 2) History of Disease. If someone with lung disease such as asthma also had lung capacities are different when compared to someone who did not have lung disease -paru. In -paru lungs of asthmatics will be narrowed, so that the air flow in and

out of the lungs -parumenjadi reduced. It causes impairment of lung capacity. 3) lifestyle. Lifestyle of a person in a day-today, such as patterns of foods causing obesity, lack of activity in the exercise, and smokers causing constriction of blood vessels that affects a person's vital capacity lungs. 4) Physical Activity and Exercise Habits. For functional anatomical measurements of lung capacity is affected by exercise habits and history of the person's illness.

B. Discussion

Regular exercise can increase lung vital capacity a 17-year-old athlete can match vital lung capacity of ordinary people aged 20 years. Lung vital capacity can be concluded no influence with age. Regular exercise can increase a person's vital capacity of the lungs.

The maximum breathing capacity is about 50 percent larger than lung ventilation true during maximum exercise. This situation presents a security element for the athlete, giving additional ventilation can be used in conditions such as 1) exercise at high altitude. 2) exercise in very hot conditions. 3) pennisapan system abnormalities.

The most important thing is that the respiratory system is normally not a major limiting factor in the transport of oxygen to the muscles for maximum muscle aerobic metabolism. We will see singkay that the heart's ability to pump blood to the muscles is the limiting factor is greater.

Total lung capacity is the maximum volume where the lung can be developed much as possible with the forced inspiration (approximately 5800 mm) This amount is equal to vital capacity plus the residual volume.

4. CONCLUSION

It is known from the results obtained sigifikansi value $0.141 > 0.05$, which means there is no significant effect (significance) variable X (age) Variable terhadapadap participation (KV), This is due to some other factors such as posture, body shape, exercise, sex and pregnancy.

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