

Female to male
smokers or female to
male nonsmokers
exercise or
nonexercise whos ...



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Female to male smokers or female to Male nonsmokers/ Excerise or Nonexcerise whos in worse shape

INTRODUCTION Currently, the leading cause of morbidity and mortality are caused by lifestyle diseases whose development have been said to be hastened by smoking and mitigated by exercise (WHO, 2011). However, because the volume of a lung depends on the height of the individual, this experiment hypothesizes that men have a higher vital capacity than women, regardless whether they are smoking or physically active. Also, exercise increases vital capacity and lowers body mass index, while smoking decreases vital capacity.

MATERIALS

Male and female subjects were gathered, and their height, weight, pulse rate, and vital capacity were measured. Spirometer was used to measure the latter.

RESULTS

42 males and 130 females, ages 9 to 59 years old were surveyed. For the pulse rate (fig. 1), no significant differences were seen among groups. The body mass index is consistently higher among males than in females, except for smoking individuals, in which no significant difference was seen. In addition, the lowest average BMI for both male and female was recorded among exercising individuals (fig. 2). In terms of lung capacity, those of males were apparently bigger than females'. The high standard deviation made this finding insignificant.

DISCUSSION

Although the vital capacity has not been shown in this experiment to be

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bigger among males than in females, such has been proven, because the size of the lungs is directly related to the height of an individual. However, certain lifestyle activities change vital capacity. Smoking decreases the lung capacity because the chemicals in it imbed on the lung tissue and make the lungs less elastic, preventing it to expand to get air. Exercise, on the other hand, strengthens the respiratory muscles as well, causing lungs to expand maximally (British Lung Foundation, 2007).

On the other hand, the obtained data supports the hypothesis that exercise decreases BMI. This is because exercise uses up surplus calories stored in the body as fat. Among individuals that have a normal BMI, men may have a higher BMI than women because they are naturally more muscular, which weighs more than the same volume of fat.

To prevent the high standard deviation, future studies can opt to study subjects of similar age groups. As well, an equal number among subgroups should be aimed for.

References

The top 10 causes of death. 2011. World Health Organization. October 29, 2011 .

About your lungs. 2007. British Lung Foundation. October 29, 2011