

UNIVERSITI TEKNOLOGI MARA

**COMPARISON OF LUNG FUNCTIONALITY
BETWEEN SMOKERS AND NON-SMOKERS
MARATHON RUNNERS**

By

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DECLARATION OF ORIGINAL WORK
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This work has not previously been accepted in substance for any degree, locally or overseas and is not being concurrently for this degree or any other degrees.

This research project was the best result of my independent work and investigation, except, where otherwise states. I absolve Universiti Teknologi MARA (UiTM) and it is Faculty of Sport Science and Recreation from any blame because of my work.

All verbatim extract is being distinguished by quotation marks and sources of my information have been specially acknowledgement.

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ABSTRACT

Introduction: Marathon runners need a very good lung in order to maintain their performance in a prolong duration. Smoking generally can decrease lung functionality in marathon runners's performances. Hence, spirometry test was done to compare lung functionality between smoker and non-smoker for marathon runner.

Objectives: The purpose of this study is to determine the lung functionality between smokers and non-smokers among marathon runner and to compare the outcome measures between smokers and non-smokers among marathon runner.

Method: The spirometric parameters were measured at two different categories which is smokers and non-smokers among marathon runners. The independent variable (IV) is representing the smokers and non-smokers and dependent variable (DV) will be representing on lung volume. 15 male marathon runners were tested using spirometer and the Force Vital Capacity (FVC) and Force Expiratory Volume 1 (FEV1) was measured. Number of smokers are 7 and the number of non-smokers is 8. Mean and (SD) age for smoker; 25.38 ± 1.80 , height; 169.14 ± 4.74 and weight; 65.86 ± 10.82 . Mean and SD for age non-smoker; 25.38 ± 2.61 , height; 164.60 ± 2.97 and weight; 60.38 ± 6.04 . The data collected have been analyzed using Statistical Package for Social Science (SPSS) version 20.0.

Result: The results show that FEV1 has no significance difference between both categories, but the FEV/FVC% have significant differences between smoker and non-smoker among marathon runners.

Conclusion: There is a significant difference effect on FEV/FVC% between smoker and non-smoker which there is a significant improvement at mean differences, Thus, the null hypothesis is accepted.

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