

ABSTRACT

THE COMPARATION OF PULMONAL VITAL CAPACITY, *FORCED EXPIRED VOLUME IN ONE SECOND* AND *MEAN ARTERIAL BLOOD PRESSURE* BETWEEN BASKETBALL ATHLETES AND SPRINTER ATHLETES

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Sport is a routine physical activity associated with cardio-respiratory system. Exercise consists of aerobic exercise and anaerobic exercise. One example of aerobic exercise is basketball and one of example of anaerobic is sprints. Aerobic exercise is more dominant on the respiratory system, whereas anaerobic exercise dominating on the cardiovascular system. The purpose of this study was to compare the lung vital capacity, forced expired volume in one second, and mean arterial blood pressure in basketball athletes and sprinter athletes.

This study design using comparative analytical method with cross sectional approach. The study was conducted in September 2015 in Pahoman Stadium and Dino Sport Bandar Lampung Bandar Lampung. These samples included 15 basketball athletes and 20 sprints athletes. The research sample was determined using total sampling technique then adjusted with inclusion and exclusion criteria.

The results obtained that lung vital capacity value basketball athletes is 5.80 liter and for sprints runners is 3.74 liter and has a difference of 2.06 liters. According to the Mann-Whitney alternative test obtained that $p = 0.001$, so it concluded there is a significant comparison value in lung vital capacity in basketball athletes and sprinter athletes. Results of research of forced expired volume in one second of basketball athletes run is 3.93 and sprinter athletes is 2.45, with a difference is 1.45. Based on the independent t test obtained that $p = 0.000$. In the mean arterial blood pressure research on basketball athletes gained 91.98 mmHg and 95.98 mmHg for sprinter athletes. Based on the Mann-Whitney test alternative, it is obtained that $p = 0.004$, so it concluded there is significant comparison of mean arterial blood pressure in basketball athletes and sprinter athletes.

Keywords: athletes, basketball, FEV1, MABP, sprinting, vital capacity of the lungs