

The Comparison Cardiorespiratory Physical Fitness Level between 12 Minutes Cooper Running Test and Ergocycle Astrand

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ABSTRACT

Introduction: The physical fitness level is body health parameter. It can be measured by 12 minutes Cooper running test and ergocycle Astrand test through VO₂ max calculation.

Objective: This study was to know cardiorespiratory physical fitness level comparison between 12 minutes Cooper running test and ergocycle Astrand test.

Method: The subject of this study consisted of 29 male students of Medical Faculty Airlangga University aged between 19-21 years old with normal until overweight body mass index (BMI). Statistical analysis used t-test independent.

Result: On ergocycle Astrand test resulted 5 students (17.2%) showed very good criterion, 6 students (20.7%) good, 8 students (27.6%) moderate, 10 students (34.5%) poor. By average, the students showed VO₂ max = 40.07% mlO₂/kgweight/minute. Furthermore, 12 minutes Cooper running test, the resulted is 1 student (3.4%) showed good criterion, 4 students (13.8%) moderate, 7 students (24.1%) poor, and 17 students (58.6%) very poor. By average, the students showed VO₂ max = 32.62 mlO₂/kgweight/minute. 12 minutes Cooper running test and ergocycle Astrand test have significant difference test and according to t-test independent statistical analysis ($p < 0.0001$).

Conclusion: The physical fitness level of 12 minutes Cooper running test and ergocycle Astrand test have significance difference statistical analysis which ergocycle Astrand have higher physical fitness level than 12 minutes Cooper running test.

Keywords : *Physical fitness level – ergocycle – Cooper*