

The Comparison of Movement and Physical Fitness in Secondary Male Students in Altitude and Coastal Areas

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Abstract : The purpose of this study is a comparison of movement and physical fitness in athlete's male students in altitude and sea-level. The samples consist of 450 subjects in altitude and sea-level in Iran in years of 2013 which were selected randomly from the population. We investigated the effect of high altitude on the tests activity profile of youth high altitude and sea level residents. Methods 450 Sea Level (Mahmood Abad) and 450 Altitude-resident (Shahre-Kord) athlete students tests of physical fitness near sea level (-5 m) and in Altitude (2100 m). This study is Descriptive Research (causal-comparative research). The tests of physical fitness include pull-ups test, sit-ups test, agility test(4 9), 45 sprint test, 1600 m running, long jump, and flexibility test. For determining of different between the physical fitness of altitude and sea-level students was used t-test ($P \leq 0.05$). The result of this study show that there is no significant difference between the average of pull-ups test, flexibility, 45 sprints, and agility (4 9) test of students in sea-level and altitude. But there is a significant difference between the average of sit-ups, 1600 m running and long jump in altitude. The students of altitude have higher power rather than sea-level. But the students of sea-level have stronger abdominal muscles and cardio-respiratory endurance rather than altitude. High altitude reduces the distance covered by youth athlete students during tests. Neither acclimatisation nor lifelong residence at high altitude protects against detrimental effects of altitude on tests activity profile.

Keywords : physical fitness, sea level, altitude areas, AAHPERD test

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