

## Impact of an Exercise Program on Physical Fitness of a Candidate to Naval Academy: A Case Study

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**Abstract :** Candidates to join the Naval Academy have to take a set of physical tests, which is crucial for a high level of physical fitness. Thus, the planning of physical exercises for candidates to the Naval School must take into account the improvement of their physical fitness. The aim of this study was to investigate the impact of a 6-month exercise program to improve the physical fitness of an individual who will apply for the Naval Academy. This was a non-experimental pre-post-evaluation study. The patient was male, had 18 years old, and a body mass index of 21.1 kg.m<sup>2</sup>. The patient participated in a 6-month aerobic and strength exercise program (3 sessions per week, 75 minutes duration each session). Physical fitness tests were performed according to the physical fitness requirements for entry into the Naval academy (muscle strength [maximum number of lifts and maximum number of sit-ups for 1 minute]; aerobic fitness [2.4 km run and 200 m swimming test]) before (baseline) and after the exercise intervention (6 months). Regarding muscle strength, in the abdominal test, the improvements between the pre-test (39 abdominals) and post-test (61 abdominals) were 56.4%. For elevations, there was an increase in its number by 150% between the pre-test (4 elevations) and post-test (10 elevations). With regard to aerobic fitness, in the 2.4 km race, there was an evolution of 32.0% between the pre-test (16.46 min.) and the post-test (12.42 min.). For the 200-meter swimming test, there was a negative variation of 2% between the pre-test (2.25 min.) and post-test (2.28 min.). A 6-month aerobic and strength exercise program leads to a positive evolution in the muscular strength of the patient. Regarding aerobic fitness, opposite results were found, with a positive evolution in the 2.4 km running test and a negative evolution in the swimming test. In future exercise programs for the improvement of the physical fitness of candidates for the Naval Academy, more emphasis has to be done on specific swimming training.

**Keywords :** case study, exercise program, Naval Academy, physical fitness

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