

General Conclusion

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The physical training of a soldier is conditioned by both environmental and genetic factors, but the most striking factor in health conditions and that is influenced by habits, is represented by lifestyles. Therefore, maintaining adequate physical preparation becomes an important factor of well-being and health. The military member of any State security force needs to have a good level of preparation, given the high demands of physical and mental activity during the performance of the tasks of his profession, either during training periods or in different theatres of operation. The monitoring of the level of physical conditioning in any military must be a fundamental milestone, which must be evaluated and analyzed in the operational performance, as well as the mechanisms to ensure the skills of the combatant personnel. An adequate physical condition can protect the soldier from stressful situations during the development of his activity, at the same time can reduce other complications in the face of any type of injury. It is commonly known that intensive training decreases risk factors for cardiovascular diseases, leading to a loss of body weight by reducing the percentage of visceral fat and an increase in cardio-respiratory level. These findings also translate into a reduction in the risk of morbidity and mortality, after obtaining improvements in well-being related to the quality of life. Because physical preparation has been conceptualized as a multidimensional construct (cardio-respiratory endurance, muscle power, muscle endurance, flexibility, body composition), its evaluation includes multiple tests that have been developed in laboratories and high-performance centers, but adapted to the specific fields of military-physical training. This book mentions and implemented some

measurement tools of the research centers in physical activity, such as the use of electrical bioimpedance in the determination of body composition, the use of force platforms and inertial accelerators for the quantification of the propulsive force and muscle power of the upper and lower limbs, as well as the determination of asymmetries in the different phases of the jump. Specific tests such as the «Sit and Reach» test, 90-90 and the ELY test were also used to evaluate the flexibility of groups of military athletes. In addition, field tests adapted to the military and sports environment were used, which are an indirect reflection of what happens in a laboratory equipment (the use of the Cooper test in relation to some ventilatory variables obtained by means of an ergospirometer). Among the contributions of this work in the knowledge about military physical training, it can be mentioned that it is the first approximation initiative in the evaluation of the level of physical preparation of the Colombian military. All the studies in this compilation are based on scientific accuracy from a methodological perspective, which also allows the reproducibility of the tests, that is, their external validity. This is the basis for other researchers to determine the scales of the physical, physiological and biomechanical variables of the state and physical capabilities of the military population in the country. The authors are aware that within the execution of the works that compose the book are limited in some studies in terms of the number of the sample, but correspond to small population groups. Also, bear in mind that this opens the possibility for new studies with more representative samples to be contrasted with the results obtained here, in order to improve the internal validity of the same. This book is the first step in a series of investigations into military physical performance and factors associated with health in active members of the National Army, which will first aim to characterize, evaluate and determine training plans that optimize the pillars of doctrine at the institutional level. The ultimate goal is to achieve better physical conditions for the combatant, for a better quality of life and safety in operational performance.