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The Determinants of Military Combat Capacity Longevity: between Physical Specialization, Training Volume, and Recovery

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Abstract

Maintaining an optimal level of military physical readiness constitutes a strategic objective for the military organization, having a direct impact on operational efficiency and the longevity of the soldier's combat capacity. Despite accelerated technological progress, the human factor remains the determinant of success in military actions; the adoption of a healthy lifestyle results from the complex interaction of biological, psychological, and social factors. In the initial stages of a military career, the goal is to achieve a high level of physical readiness early on, coupled with its continuous preservation and optimization. Contemporary approaches promote a holistic, salutogenic vision of military physical training, grounded in the integration of physical, mental, nutritional, spiritual, and recovery components. This research is based on a theoretical analysis of specialized literature that highlights the importance of the balance between specialization, training volume, and recovery strategies. It emphasizes the role of parameters such as BMI (Body Mass Index), HRV (Heart Rate Variability), and sleep quality in preventing injuries and sustaining career continuity. Further applied studies are necessary to validate these perspectives within the current Romanian military context.

Keywords:
Military Physical Education; Longevity; Operational Efficiency; Salutogenesis; Holistic.

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Introduction

Achieving and establishing an optimal level of a soldier's combat capacity represents a fundamental objective in the periodization of activities carried out within the military organization. A soldier's combat capacity is grounded in specialized military knowledge and the attainment of an adequate level of moral and physical readiness, as well as their continuous preservation and improvement. Regardless of the level of technological development characterizing the contemporary military space, the human factor remains the central element of all operational actions. While maintaining an optimal level of military readiness depends on several aspects, the soldier's physical and mental health status plays a decisive role in achieving the proposed goals.

From a salutogenic perspective on the approach to physical education, three main components define the Sense of Coherence (SOC): comprehensibility, manageability, and meaningfulness (Antonovsky 1987, 15-19). These constitute relevant theoretical benchmarks for the foundation and optimization of educational interventions applicable to the field of military physical education, aiming for the sustainable preparation of personnel and the maintenance of an optimal state of health. Understanding the world we live in, resource management, and the significance of one's own actions provide the soldier with a solid foundation for adequate operational readiness. Acquiring awareness of the importance of maintaining a healthy lifestyle is the result of a complex interaction between biological, psychological, and social factors (Guo et al., 2021).

In designing the initial trajectory of an excellent military career, the goal is the early attainment of a high level of combat capacity. This level plays an essential role both in the efficient fulfillment of intended combat missions and in the role of a citizen adapted to society, involved and devoted to moral values. New approaches to the development of individual combat capacity promote a holistic, salutogenic-oriented vision of physical training, based on five core pillars centered on the soldier's physical and mental health. Their operational efficiency is determined by:

1. Physical readiness;
2. Mental readiness;
3. Nutritional readiness;
4. Spiritual readiness;
5. Recovery strategies.

The present study represents a theoretical analysis of specialized literature with applicability to the modern military environment in Romania. Critical analysis of literature sources suggests that early specialization and the attainment of high levels of military physical performance are desirable; however, these must be correlated with other essential factors of integrative preparation. In the absence of this balanced approach, the risk of physical injuries, psychological disorders, and even

the abandonment of the military career increases significantly, thereby affecting the longevity of the military career with direct implications for the social sphere.

Maintaining adequate parameters regarding Body Mass Index (BMI), recovery – specifically Heart Rate Variability (HRV) and sleep quality – and the correct identification and interpretation of stress factors, alongside a low history of injuries, have been identified in the literature as protective factors associated with the continuity and efficiency of military activity. In the long term, the cumulative effect of these practices is reflected in the development of an organizational culture where physical and mental preparation, at both individual and group levels, is not imposed, but embraced (Fullagar et al., 2015).

Therefore, the longevity of a soldier's combat capacity depends on an optimal balance between the timing of specialization, training volume and intensity, and effective recovery strategies. This critical investigation of the specialized literature represents a first step toward shifting the organizational vision regarding physical training conducted in an organized and scientific manner. The research necessitates further completion through applied studies conducted on extensive samples of military personnel at various stages of their careers. The pragmatic goal of this research is to present to specialists in the field the necessity of a holistic approach to military physical training – grounded in salutogenic information – by demonstrating the long-term effects of this approach on increasing personal resilience in relation to probable life events and by fostering an awareness of the origins of health.

I. Military Physical Specialization

Individual combat capacity is linked to the soldier's level of specialized training and technical equipment, but also to their physical, mental, nutritional, spiritual, and recovery preparation. Together, these allow the soldier to dominate the adversary in combat. More simply put, they provide the soldier with lethal qualities in relation to the enemy. Military physical training represents a fundamental component of military instruction, playing a direct and decisive role in the operational efficiency of personnel. Military physical training not only ensures the physical capacity to fulfill combat tasks; it also contributes to mental endurance, injury prevention, and team cohesion. Physical training allows the soldier to fulfill assigned missions, survive on the battlefield, and effectively utilize their weaponry and equipment, but only in close connection with the other aspects that consolidate sustained combat capacity. Therefore, physical training is an integrated part of the soldier's individual combat capacity, which is defined as a lethal physical and mental system that offers the soldier the possibility of battlefield supremacy and a healthy return home (Adler et al., 2009). With these values at the center, the goal is to maintain a high level of health among military personnel. Without systemic issues related to troop or individual health, combat preparations can proceed according to developed plans. Over time, by forming an organizational culture in this regard, one can speak pragmatically

about the longevity of the military career. This approach directly results in a series of positive effects worth addressing to raise awareness of operational efficiency.

Effects of Military Physical Training on a Soldier's Operational Efficiency:

a) Efficiency: Soldiers in good physical condition learn combat actions approximately 20% faster and execute them with greater skill. Physical training allows them to cope with intense physical and psychological demands, such as carrying heavy loads, moving quickly over rough terrain, overcoming natural obstacles, and maintaining vigilance without compromising their health.
b) Endurance and Resilience: Military physical training develops physiological and psychomotor capacities essential for survival and success under conditions of stress, chronic fatigue, and hostile environments.
c) Injury Prevention: Through well-structured training, the soldier learns elements of the physiology of the musculoskeletal system, recovery, and nutrition, reducing the risk of injuries or imbalances within the body during missions.
d) Increased Precision and Confidence: Physical training improves shooting accuracy and the ability to maintain vigilance and precision despite physical exertion.
e) Developing a Warrior Spirit: Rigorous physical training not only affects the muscular system but also shapes a warrior mindset, increasing self-confidence, self-discipline, and group cohesion.
f) Adaptability: The physical training process is adapted to the modern requirements of the battlefield, ensuring that soldiers are prepared for various climatic and terrain conditions (Nindl et al., 2013).

1.1. Early Physical Specialization in the Military Career

The first steps in a military career involve going through the stages of recruitment, selection, admission, and initial professional training. During the selection stage, the motor skills of the candidates are tested, among other attributes. Starting from the premise that those selected are motor-fit to carry out physical and psychological activities specific to the military environment, it is self-evident that physical specialization begins from a certain level of performance rather than from zero (Lai et al., 2026). Depending on each candidate's aspirations and their physical and mental performance, they follow an initial stage of professional training after the admission exam, aimed at achieving specialization within a well-established timeframe in a specific area of interest, both for the military system and, especially, for the respective candidate.

From the perspective of physical specialization, the goal is to develop those motor skills that grant the soldier the ability to execute assigned missions successfully and without adverse effects on their health. To this end, the design of a soldier's physical training must adhere to a series of basic rules and principles constructed in such

a way that the longevity of their career does not suffer. Early attainment of a high level of military physical readiness is supported by solid theoretical arguments that emphasize operational performance, injury prevention, and the development of resilience. This, therefore, represents a strategic necessity of the military system, not just a physical training requirement per se (Vaara et al., 2022).

1.2. Theoretical Arguments for Early Achievement of a High Level of Readiness

Early physical preparation aims to rapidly transform the soldier into a secure, efficient, and long-lasting operational resource. Achieving this goal must not overlook the fact that at the heart of the military system stands the human being – a complex entity, not a simple robot to be programmed, with multiple needs and individual aspirations. The primary objective for military physical training specialists is to minimize the time allocated to meeting the performance criteria necessary for successful mission execution while simultaneously reducing injuries and accounting for the attrition rate (dropout).

Key Theoretical Arguments:

a) Optimization of Physiological Adaptations and Reduction of Injury Risk: Early preparation allows the body to gradually adapt to intense strength and endurance loads, lowering the risk of stress fractures and musculoskeletal injuries during basic training. Soldiers who reach a high level of physical readiness before joining combat units are less prone to attrition.

b) Increased Physical and Mental Resilience (Mental Toughness): Achieving a high level of physical readiness is closely linked to the ability to cope with stress, fatigue, and uncertainty in combat conditions. Early training builds a solid foundation of resilience, helping to maintain focus and discipline under pressure. Military physical training provides the soldier with the capability to be lethal against the enemy and return home healthy.

c) Increased Prompt Operational Capacity: The immediate physical availability of soldiers is crucial for the military organization. The fact that a soldier is prepared 24/7 to execute assigned missions provides the system with adequate operational capacity.

d) Development of Lifestyle and Functional Military Habits: Attaining a high level of physical readiness facilitates the creation of new neural pathways and healthy habits, such as proper nutrition and the correct ratio between training and rest, which are necessary to maintain performance over the long term.

e) Effectiveness of Specialized Training: A soldier can more rapidly assimilate specific technical and tactical skills when they possess a sustained level of physical training, compared to a soldier who must build a physical foundation in parallel with learning techniques (Knapik et al., 2006).

1.3 Risks Associated with Excessive Physical Specialization for Soldiers

Although specialization is necessary to master advanced technologies, a balanced army requires a combination of technical experts (specialists in specific fields or

combat arms) and leaders capable of understanding the big picture (generalists) to face hybrid and unpredictable threats. Physical specialization aims to develop a physically complete soldier, rather than merely focusing on the particular development of specific motor qualities or skills of temporary interest. Excessive physical specialization (hyper-specialization) within the armed forces, while potentially increasing efficiency in a narrow domain, presents significant strategic, operational, and personal risks. In an unpredictable security environment characterized by hybrid threats and rapid technological changes, a narrow approach can become a weakness. Therefore, the goal is for physical training to adopt a salutogenic direction over time, centering on the individual's awareness that, above all, maintaining health, avoiding injury, and preserving a balanced lifestyle can lead to increased longevity in a successful career. The primary risk of physical hyper-specialization is related to plateauing and obsolescence. When the expertise acquired by a soldier is no longer current or relevant, they often exhibit general apathy toward retraining or discovering new values. Furthermore, excessive physical wear and tear can lead to a repulsion toward continuing even basic physical training. Consequently, physical preparation is intended to be vectorial – adapted to the new challenges of the modern battlefield, continuous, and conscious. Conducting physical training in an organized manner under the guidance of specialists can prevent the risks and side effects of excessive physical training (Southwick and Charney 2012).

II. Methodology

The present study is based on a theoretical-conceptual research design with exploratory and applied dimensions, aimed at establishing an integrative model for optimizing the longevity of a soldier's combat capacity. The methodological framework integrates a systematic literature review in the fields of motor sciences, exercise physiology, military psychology, and military physical education; a documentary analysis of military regulations defining physical training concepts; and structured conceptual modeling. The objective was to theoretically clarify the relationship between military physical specialization and the sustainability of operational performance. Information regarding the impact of training volume and intensity on maintaining long-term combat capacity was analyzed, alongside the role of systematic recovery in preventing functional wear and performance decline (Zatsiorsky and Kraemer 2006).

Information and documentation sources were selected based on:

a) Relevance to the field of military physical education and exercise physiology;

b) Scientific impact (peer-reviewed publications, official normative documents);

c) Conceptual contribution to understanding the relationship between training volume, motor specialization, and biological adaptation;

d) Applicability within structured institutional contexts.

The conceptual analysis procedure aimed to determine the degree of normative compatibility between the principles of functional sustainability and the current

training structure. The conceptual analysis was carried out through a structured four-stage procedure:

I. Identification of theoretical constructs;
II. Thematic categorization;
III. Analysis of information sources;
IV. Presentation of the theoretical model.

The analysis of the military normative framework took into account educational and instructional regulations, which were addressed through a structured content analysis focused on the following key benchmarks: military physical education objectives and performance standards, training planning structure, provisions regarding injury prevention and recovery, and flexibility in adapting to individual characteristics. The methodological result of the study provides a conceptual framework for implementing physical training programs designed to optimize combat capacity longevity by balancing the relationship between physical specialization and training volume, and planned recovery and prevention of operational wear. Given its exploratory and conceptual nature, the study does not include empirical validation. Further quantitative research is required to evaluate measurable effects on operational performance and the duration of maintaining combat capacity throughout a military career, viewed through the lens of holistic military physical training.

III. Training Volume in the Military Environment

Unlike the civilian environment, where physical training is predominantly oriented toward achieving competitive performance, military physical training – specifically the dosage of training amount and intensity – aims to develop general and specific functional capacity. This is designed to fulfill missions under conditions of high physical and psychological stress (Cohal 2025). Depending on the specifics of each branch and specialization, military physical training is based on three major directions of implementation: precision, progressivity, and operational integration.

3.1. Precision of Execution and the Kinesthetic Dimension

The precision of execution represents the foundation of military physical readiness. From a neurophysiological perspective, this involves the development of kinesthetic capacity – that is, the soldier's ability to perceive the position of body segments, the amplitude of movements, and the ratio between muscle tension and relaxation. Through the controlled repetition of exercises, the soldier develops stable motor patterns which, through synaptic consolidation, transform into functionalisms (Chen et al., 2025).

These functionalisms are essential in operational situations where reaction time and correctness of execution can have direct implications for individual and collective security. Exercise complexes are designed to optimize the motor parameters

required for each specialization (e.g., endurance and explosive strength for infantry, coordination and balance for special forces, etc.). Thus, precision is not just a biomechanical objective, but a vector of tactical efficiency.

3.2. Progressivity

The progressive nature of military training involves applying classic principles of periodization, adapted, however, to institutional and operational realities. Periodization can be structured into:

A. Annual Macro-cycles: Correlated with mission planning and physical evaluations;
B. Meso-cycles (4–8 weeks): Oriented toward the development of a dominant motor quality;
C. Weekly Micro-cycles: Featuring alternation between volume and intensity loads.

The principle of supercompensation is essential in this logic. The relationship between training load and functional adaptation can be explained through the classic supercompensation model. Following a phase of temporary decrease in functional capacity (fatigue), there is always a phase of increase above the initial level, provided that recovery is adequate.

Incorrect application of this principle can lead to either stagnation or chronic overtraining. In the Romanian military environment, the major challenge lies in harmonizing the scientific periodization of training volume with the requirements of the operational schedule, which can disrupt optimal adaptation cycles. Simply put, training continuity in the military environment must always be weighed against operational demands.

3.3. Operational Integration

The amount of training (total duration, number of repetitions, distance covered, etc.) and intensity (relative to individual maximum capacity) must be calibrated according to functional objectives. Intense physical effort must be adapted within the operational context and must align with the primary objective of the organization. This conceptual representation indicates the existence of a functional optimum, which is essential in the military environment. Here, the goal is not a singular maximal performance, but rather the maintenance of constant, long-term operational capacity and the quality of health status (Kyröläinen et al., 2008).

Military functional performance must be evaluated through multiple indicators:

1. VO_2max and aerobic endurance;
2. Relative strength and anaerobic capacity;
3. Postural stability and coordination;
4. Psychophysical resilience.

Therefore, individual awareness regarding the "origins of health" and the importance of maintaining it – alongside the implementation of modern monitoring systems

(HRV, lactate assessment, subjective scales of perceived exertion – RPE) – could optimize the ratio between volume, intensity, and recovery.

IV. Physical Recovery

In the architecture of military physical training, recovery should not necessarily be understood as a mere break between two cycles of exertion, but rather as a strategic component of maintaining combat capacity. In an operational context, optimal combat capacity is not a one-time objective, but a functional state that must be preserved over the long term under conditions of repeated demand, psychological stress, and tactical unpredictability. Viewed this way, the recovery process acquires significant value and must be seen as an integral part of the general military physical training process (Deuster and Silverman 2013).

4.1. The Importance of Recovery in Maintaining Combat Capacity

Physical recovery allows the soldier to maintain control over their own body and offers the possibility of extending their active operational status and, above all, their health. Physical recovery plays a decisive role in maintaining a high level of combat capacity, which represents a multidimensional construct including physical, cognitive, and psychological parameters. From a physiological perspective, the relationship between load and functional capacity can be conceptualized as an adaptation process dependent on the balance between stress and recovery (Feigel et al., 2026). If the demand constantly exceeds the capacity for restoration, a progressive decline in performance occurs. In the absence of adequate recovery, the progressive degradation of physiological resources leads, in the short and medium term, to:

1. Diminished strength and endurance;
2. Increased reaction time;
3. Impaired decision-making clarity;
4. Increased vulnerability to injuries.

For the military environment, this decrease in physiological resources not only affects the individual soldier or a group of soldiers at a specific point in time but also the entire organizational structure. Consequently, recovery becomes an operational security factor that deserves to be treated with great responsibility by commanders and acknowledged by all military personnel. In support of this goal, specialized training for commanders regarding military physical education, as well as the knowledge and utilization of specialized technology in the field, can be determining factors in supporting the maintenance of an optimal level of operational readiness.

4.2. Physiological Indicators of Recovery

The implementation of a modern recovery monitoring system within military structures could contribute to optimizing training and reducing injuries. Traditional military culture, predominantly oriented toward discomfort tolerance, can have an inhibiting effect that leads to the false reporting of fatigue. Therefore, it is necessary to develop an organizational culture that differentiates physical effort between

resilience and harmful overloading. Relevant indicators include:

a) Heart Rate Variability (HRV)
   a. HRV reflects the balance between the sympathetic and parasympathetic nervous systems. Increased variability indicates a good capacity for adaptation and recovery, while a persistent decrease may signal accumulated fatigue or chronic stress.
   b. In the military environment, HRV monitoring could provide an objective tool for adjusting training volume and intensity, especially during periods of intense instruction or preceding external missions.

b) Sleep Quality and Duration Sleep is essential for:
   a. Muscle recovery processes;
   b. Cognitive functions;
   c. Hormonal regulation (cortisol, testosterone);
   d. The immune system.

c) Accumulated Fatigue and Subjective Perception of Effort. These can be analyzed using RPE (Rating of Perceived Exertion) scales and wellness questionnaires, which can complement the objective data of the recovery monitoring system (Plews et al., 2013).

4.3. Modern Injury Prevention Strategies

Musculoskeletal injuries represent one of the primary causes of temporary unavailability within military structures. Their prevention must be systemic and multidimensional. Even though the military environment operates on the principle of uniformity, adapting training to individual anthropometric and functional characteristics can significantly reduce the risk of injury. Periodic testing (strength, mobility, stability) allows, to a certain extent, for the adjustment of physical training programs. A modern and proven alternative is the integrative neuromuscular training method (Chen et al., 2025). This is generally based on stabilization, proprioception, and motor control exercises designed to reduce the incidence of ligament and muscle injuries. Integrating these into a daily routine (10–15 minutes) can have a disproportionately large impact on a soldier's long-term health.

Furthermore, managing cumulative load by respecting the acute-to-chronic workload ratio reduces the risk of injuries. The salutogenic approach to military physical education and physical training can also contribute significantly to injury prevention. Over time, the soldier comes to realize that the origin of health does not lie in treating diseases or accidents, but in the way they perceive their health through the regular performance of scientific physical exercise.

Health level is not exclusively a medical issue, but also a matter of leadership. Commanders must understand the relationship between recovery, performance, and operational efficiency. In this regard, their personal example concerning physical training offers subordinates, in addition to the specialized information conveyed, courage, confidence, and the desire to fulfill their assigned missions. A culture of prevention, as part of physical training, indirectly contributes to reducing the logistical and medical costs within the system.

Conclusions

The longevity of a soldier's combat capacity is not the result of maximum training intensity, but rather of an intelligent balance between demand and recovery, between specialization and adaptability, and between performance and health. The proposed model focuses on the origins of the soldier's health status and supports the transition from an organizational culture based on sustained, permanent maximal effort to a culture of sustainable performance, scientifically grounded and salutogenically oriented.

Regarding early specialization, studies show that while it is effective in the short term, an excessively narrow focus can lead to plateaus, functional obsolescence, and a decrease in motivation. A vectorial, adaptive, and continuous approach is more suitable for the contemporary security environment. Last but not least, it must be concluded that leadership plays a determinant role in implementing a sustainable physical training model for the military system.

References

Antonovsky, A. 1987. *Unraveling the Mystery of Health: How People Manage Stress and Stay Well*. San Francisco: Jossey-Bass.

Adler, A.B., P.D. Bliese, D. McGurk, C.W. Hoge, and C.A. Castro. 2009. "Battlemind training: Building soldier resilience". *Military Medicine* 174(1): 45–50.

Chen, B., L. Deng, Y. Liu, X. Deng, and X. Yuan. 2025. "The Effect of Integrative Neuromuscular Training on Enhancing Athletic Performance: A Systematic Review and Meta-Analysis". *Life* 15(8): 1183. https://doi.org/10.3390/life15081183.

Cohal, D. 2025. "Effective Methods for Optimizing Effort Capacity in the Military Pentathlon". *Balneo and PRM Research Journal* 16(3): 860. https://doi.org/ 10.12680/balneo.2025.860.

Department of the Army. 2020. *FM 7-22 Holistic Health and Fitness (H2F)*. Washington, DC.

Deuster, P.A., and M.N. Silverman. 2013. "Physical fitness and resilience in military personnel". *Journal of Strength and Conditioning Research* 27(4): 1164–1175.

Feigel, E.D., A. McCarthy, J.T. Fuller, L. Rosenblum, M. Lovalekar, T. Ojanen, K. Pihlainen, B.J. Martin, K.J. Koltun, T.L.A. Doyle, and B.C. Nindl. 2026. "Nonlinear analysis reveals duration and gradient-dependent disruption of load carriage gait variability during an outdoor 6.72 km time trial in military personnel". *Applied Ergonomics* 130: 104639. https://doi.org/10.1016/j.apergo.2025.104639.

Fullagar, H.H.K., S. Skorski, R. Duffield, D. Hammes, A.J. Coutts, and T. Meyer. 2015. "Sleep and athletic performance". *Sports Medicine* 45(2): 161–186. https://doi.org/10.1007/s40279-014-0260-0.

Guo, R., M. Sun, C. Zhang, Z. Fan, Z. Liu, and H. Tao. 2021. "The role of military training in improving psychological resilience and reducing depression among college

freshmen." *Frontiers in Psychiatry* 12: 641396. https://www.frontiersin.org/journals/psychiatry/articles/10.3389/fpsyt.2021.641396/full.

Knapik, J.J., B.H. Jones, S.W. Bullock, M. Canham-Chervak, and S. Canada. 2006. "Injury rates and injury risk factors among U.S. Army soldiers". *American Journal of Preventive Medicine* 30(4): 350–356.

Kyröläinen, H., J. Karinkanta, M. Santtila, H. Koski, M. Mäntysaari, and T. Pullinen. 2008. "Effects of military training on physical performance and hormonal responses". *European Journal of Applied Physiology* 102 (5): 541–551.

Lai, S., Z. Wang, X. Gao, J. Sun, Z. Yang, Z. Kang, Y. Xu, and H. Liu. 2026. "Military training efficacy on physical fitness and mental health in college students". *WORK: A Journal of Prevention, Assessment & Rehabilitation*. https://doi.org/10.1177/10519815251409137.

Nindl, B.C., S.J. Sharp, W.J. Kraemer, J.J. Marx, M.D. Stephenson, and J.S. Volek. 2013. "Operational physical performance and readiness". *Journal of Strength and Conditioning Research* 27(4): 1164–1175.

Plews, D.J., P.B. Laursen, A.E. Kilding, and M. Buchheit. 2013. "Heart rate variability and training intensity distribution in elite endurance athletes". *European Journal of Applied Physiology* 113: 3061–3070.

Southwick, S.M., and D.S. Charney. 2012. *Resilience: The Science of Mastering Life's Greatest Challenges*. Cambridge University Press.

Vaara, J.P., H. Groeller, J. Drain, H. Kyröläinen, K. Pihlainen, T. Ojanen, C. Connaboy, M. Santtila, P. Agostinelli, and B.C. Nindl. 2022. "Physical training considerations for optimizing performance in essential military tasks". *European Journal of Sport Science* 22:43-57. https://doi.org/10.1080/17461391.2021.1930193.

Zatsiorsky, V.M., and W. Kraemer. 2006. *Science and Practice of Strength Training*. Human Kinetics.