

Calisthenic functional training: a bodyweight-based methodological variation of functional training

Calisthenic functional training: uma variação metodológica do treinamento funcional baseada no peso corporal

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Calisthenics

Calisthenics (CAL), also known as Calisthenic Training, has historical roots that link it to the development of strength, motor efficiency, and aesthetic appeal. The classical work “*Kallisthenie - Exercises for Beauty and Strength*,” authored by Heinrich Clias in 1829, underscores this connection [1]. According to Harrison [2], “*Bodyweight Training*” refers to utilizing an individual’s own body weight as resistance for performing motor tasks against gravity. In contemporary discourse, Kotarsky *et al.* [3] define CAL as a form of strength training aimed at enhancing overall physical capabilities, with a particular focus on muscular strength and endurance. Chaves *et al.* [4] propose that the terms may be considered synonymous.

CAL is a widely applicable method, frequently cited by movement professionals as a fitness trend for its minimal structural requirements and low implementation costs [5,6]. However, the lack of clear parameters for organizing CAL often leads to manipulations restricted to volume [7], thereby underutilizing other variables such as intensity and complexity, a shortfall identified by Kotarsky *et al.* [3] and McRae *et al.* [8] as limitations of CAL usage. Consequently, there is a predominance of stimuli for adaptations related to muscular endurance, while other relevant physical capacities, such as muscular power, speed, coordination, and agility, receive less emphasis [3,7].

Functional training

Functional Training (FT), as described by Da Silva-Grigoletto *et al.* [9], is a training methodology that employs a variety of methods and tools to promote a synergistic, integrated, and balanced development of multiple physical capacities.

This approach aims to ensure both efficiency and safety during daily activities, primarily emphasizing task specificity. Much like CAL, FT initially lacked a clearly defined structure for its application, which is evident in the ongoing debates surrounding the criteria for classifying any given intervention as functional. However, over the years, our research group, along with other researchers, has effectively delineated and proposed a framework for implementing FT [9–14]. This framework seeks to enhance biological function by organizing training sessions into segments that work synergistically to stimulate physical capacities, thereby maximizing adaptations and minimizing the interference effect between stimuli [15].

Da Silva-Grigoletto *et al.* [16] suggest organizing the session into distinct blocks. The initial phase centers on movement preparation, incorporating exercises designed to enhance mobility, stability, and activation. Next, some activities simultaneously develop speed, coordination, agility, and muscular power. The next stage focuses on building muscular strength through fundamental movement patterns, including squatting, pushing, pulling, and carrying. Additionally, the integration of cardiometabolic stimuli, particularly through brief, low-volume High-Intensity Interval Training (HIIT), can be included. This approach is effective for both adults and older adults, improving performance in activities of daily living (ADLs) within occupational or recreational settings [9,16]. However, despite its benefits and organized methodology, the implementation of Functional Training (FT) may encounter limitations due to structural and financial constraints.

Calisthenic functional training

Based on the FT structuring proposal by Da Silva-Grigoletto *et al.* [9] and the results derived from its implementation [17–19], it is plausible to assume that its principles can be applied to other contexts, such as CAL, to address its methodological gaps. Thus, we propose applying FT principles using body weight exclusively as resistance, similar to CAL, to induce adaptations comparable to those observed in FT studies [20]. Thus, Calisthenic Functional Training (CFT) is a methodological variation of FT that preserves its principles, utilizing body weight as the primary means to apply training stimuli in pursuit of the intended adaptations.

This proposal demonstrates significant potential for accession, as most daily activities are performed with minimal or no external load, emphasizing task specificity and the potential transfer of adaptations from CFT to ADLs. Another factor reinforcing its potential is the use of biomechanical variations strategically to increase overload within the same movement pattern. Therefore, CFT is a highly viable approach with the potential to reach a broader audience compared to FT itself, owing to its lower implementation costs and the absence of equipment to generate overload.

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