

Calisthenics and bodyweight exercises: different concepts or scientific synonyms?

Calistenia e exercício com o peso corporal: conceitos distintos ou sinônimos científicos

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Bodyweight exercises (also popularly known as calisthenics) is a classic training method and its practice has been widespread since the 19th century, but little evidenced in the scientific literature over the years. This type of training aims to promote multi-system adaptations using body weight as an overload with no or few implements [1–3]. This characteristic makes exercise with body weight easy to apply, in addition to having an excellent cost-benefit ratio when compared to other training possibilities that require machines or materials [4,5].

Bodyweight exercises have occupied a prominent place in recent years and have been cited by the worldwide research of fitness trends of the American College of Sports Medicine for the first time in 2013, where it occupied the third position. In 2015, it reached the first place in this ranking and is currently among the top 10. This can mean the search for a practical, efficient and low-cost activity, in addition to the challenging factor that advanced movements present, which can provide less monotony when compared to other strength training methods [1,4].

Thus, bodyweight exercises are present in different contexts (or modalities), such as circus activities, gymnastics, CrossFit®, cross training, functional training, Mat Pilates, pole dance, martial arts, street running, among other sports, both as a main and complementary activity [2]. In recent years, another terminological variation related to bodyweight training has emerged, the Street Workout (also popularly known as Calisthenics). In Street Workout, practitioners compete to demonstrate their skills in challenges against other athletes [6], with more complex movements with better fluidity being valued.

Although several modalities use bodyweight exercises and these exercises are popularly known as calisthenics, it is important to emphasize that the term “Calisthenics” is an independent training method that has its own concept and characteristics. According to Professor Phoktion Heinrich Clias (in his book *Kallisthenie - Exercises for Beauty and Strength*), author of one of the pioneering concepts about Calisthenics, a calisthenic training session should present a logical and systematized structure, so that the form of execution of the exercises is clear, the action velocity, the types of exercises that can be inserted, stimulated metabolic pathways, physical capacities to be developed, among other aspects. In this author’s proposal, calisthenic training or “free exercises” is divided into three large groups of exercises (introductory, fundamental and conclusive), in which rhythm is given to the execution of

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movements. From this perspective, bodyweight exercise would be a means and Calisthenics would be a method, that is, a systematic way of using this means.

However, some more recent authors [6–9] present simpler definitions of Calisthenics, such as that presented by Kotarsky [1]: “Calisthenics is a form of resistance training that uses one’s own body weight as a way to improve the general condition”.

In addition, more recent research involving the term “Calisthenics” (or calisthenic exercises) has shown interventions based on bodyweight exercises applied under different methods, not necessarily following the classic concept proposed by Clias (which includes rhythm, for example) [7–10].

In the study by Machado et al. [11] the authors applied the bodyweight exercises in a high intensity interval training (HIIT) model, naming this type of training “new calisthenics”. In the referred study, the authors state that this training model consists of performing sets of effort interspersed with a rest interval, and in each set, practitioners should be instructed to perform bodyweight exercises (eg. jumping jacks, burpee, among others) at the maximum possible velocity, without controlled or rhythmic cadence.

In the study by Guerra et al. [12], bodyweight exercise, also called by the authors “calisthenics”, were applied during school Physical Education classes in a circuit format, in which, in each station, students should perform as many repetitions as they could in 30 seconds, a characteristic that also shows the absence of cadence and rhythm control [13,14].

In view of the above, in order to build a more solid body of evidence about bodyweight exercises, the conceptual distinction between Calisthenics and bodyweight exercise seems to be incoherent, as this distinction may hinder the development of the body of knowledge about this tool. Thus, we suggest that Calisthenics and Calisthenic Exercises are understood as synonyms of bodyweight exercises. In practical terms, bodyweight exercise (calisthenics) would be the means, while the different ways of applying bodyweight exercises would be the methods.

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