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The role of static and dynamic stretching in athletic performance: A systematic review

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Background & Aim: The main categories of stretching are static and dynamic. Static stretching is a stretch held in a challenging but comfortable position for a period of time, usually somewhere between 10 to 30 seconds. It is the most common form of stretching found in general fitness and is considered safe and effective for improving overall flexibility. However, many experts consider static stretching much less beneficial than dynamic stretching for improving range of motion for functional movement, including sports and activities for daily living. Dynamic stretching is a controlled stretch which involves voluntary movement. The purpose of this literature review is to investigate whether the use of stretching before or after the workout can affect performance in sport. At the same time, we will investigate the most effective type of stretch in the performance of an athlete based on the articles to be studied. The appropriate time to apply the appropriate stretch will also be studied.

Method: The databases that were used for this review: Medline, PubMed, Cinahl, SPORTdiscus, and Cochrane. The inclusion criteria were: (1) Randomized controlled trials or controlled trials, (2) to be written in English language, (3) to provide information on the inclusion and exclusion criteria for the entry of participants, (4) studies from 2012 until 2017, (5) to compare a kind of stretch with at least one other or to compare a kind of stretching with a stretch tool and (6) have been done in different kind humans.

Result: Static stretching seems to have better results in increased range of motion, muscle stiffness, strength and muscle activation. Dynamic stretch seems to improve athletic performance in the areas of flexibility, strength, range of motion, balance and sprint.

Conclusion: The results of the study showed that static stretching should be avoided before training and it would be good to avoid up to 24 hours before an explosive workout exercise. Dynamic stretching appears to be appropriate for athletes prior to training. Dynamic stretching has positive effects in improving flexibility, agility, balance, strength and overall improvement in athletic performance. The duration of its application varies. However, the results of the research have shown that it should be applied for more than 30 seconds. Each static stretch is good to apply at least 30 seconds and not more than 60 seconds, for 3 repetitions. Also, static stretching appears to be indicated in conditions of muscle stiffness, reduced flexibility and reduced range of motion.

Biography

A Efstratiadis has completed his BSc in Physiotherapy and MSc in Sport Physiotherapy from European University of Cyprus.

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