

## The Effects of Resisted Sprint Training on Sprint Performance in Field Based Invasion Team Sport Athletes: A Systematic Literature Review

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### Introduction

Speed is an essential performance attribute for field-based invasion team sport (FBITS) players. Traditional training methods used to enhance sprint performance (SP) such as resistance training, typically aim to improve one's ability to produce force and power [1, 2] or technical efficiency [3, 4]. However, resistance training exercises (e.g. back squat, deadlift) may lack the movement specificity required to enhance SP. The principle of specificity states that the training effect which occurs in response to an exercise overload is specific to the way in which the load was applied [5]. Hence, training methods which adopt comparable mechanical properties to the performance movement (i.e. sprinting) may elicit a greater transfer effect. Resisted sprint training (RST) is a training method which applies external resistance to the sprinting movement, therefore allowing maintenance of sprint specific mechanical properties. Consequently, RST methods utilised by coaches may represent a more specific and, in turn, a more effective method for enhancing SP than traditional training methods. Therefore, the aim of this review is to investigate the effectiveness of common RST modalities at improving SP of FBITS players.

### Methodology

- Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines [6] will be adhered to (figure 2).
- The search strategy (figure 1) will be applied to the following databases; PubMed, SPORTDiscus and Web of Science.
- Inclusion and exclusion criteria will aid in identifying longitudinal RST interventions containing FBITS players.



Figure 1: Search Strategy

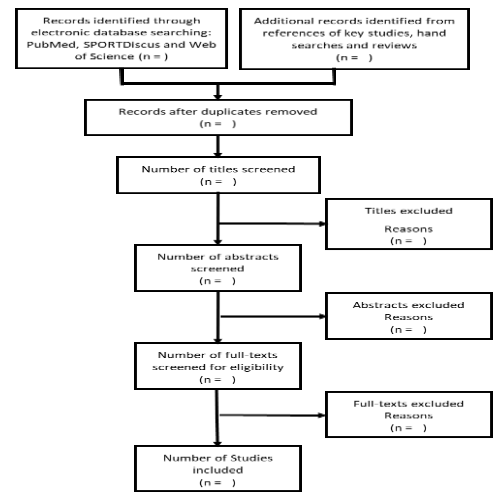


Figure 2: PRISMA Flow Chart



### Expected Outcome

- Determine the effectiveness of RST methods at improving SP in FBITS players
- Examine and compare the effectiveness of common RST modalities, e.g. 1080 Sprint, Vertimax, Exergenie, weighted vests, resistance bands, parachutes, weighted sleds
- Provide coaches with a rationale for the inclusion of RST methods and information to help guide them in their prescription of RST

### References

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