



Post-Activation Performance Enhancement (PAPE) In Men And Women



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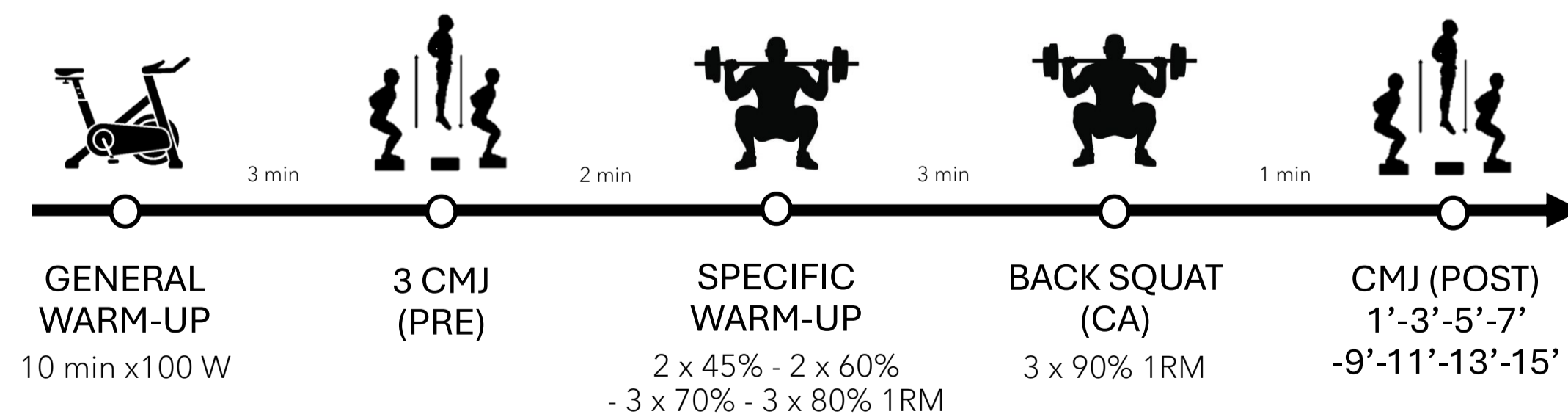
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INTRODUCTION

Post-activation performance enhancement (PAPE) refers to a temporary increase in power output following a conditioning activity (CA) [1]. Many studies have tried to investigate whether or not combining different training modalities (e.g., eccentric, concentric, and isometric training) and variables (e.g., training intensity and rest periods) would elicit PAPE, often measured as a change in jump height. Some studies reported such outcomes after different PAPE protocols. However, it seems that timing and magnitude of the potentiation effect would depend on several factors, including training background, experience, strength levels, and sex [2]. So far, no study has compared the effect of a volume- and intensity-match PAPE protocol between men and women.

METHODS

- 16 athletes (10 Men; 6 Women) with similar resistance training experience and relative strength levels in back squat.
- The CA consisted of a set of 3 repetitions of back squat at 90% of 1RM and performed after a general and specific warm-up.
- Jump height was recorded before the conditioning activity as PRE, and at regular intervals for 15 min post-intervention as POST, using countermovement jump (CMJ) on force plates.



Maximizing Performance: PAPE Shows Clear Benefits for Men, Needs Further Study for Women



Figure 1: The subject performs the conditioning activity (CA).

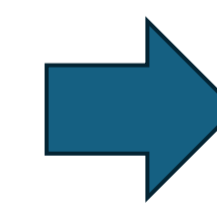
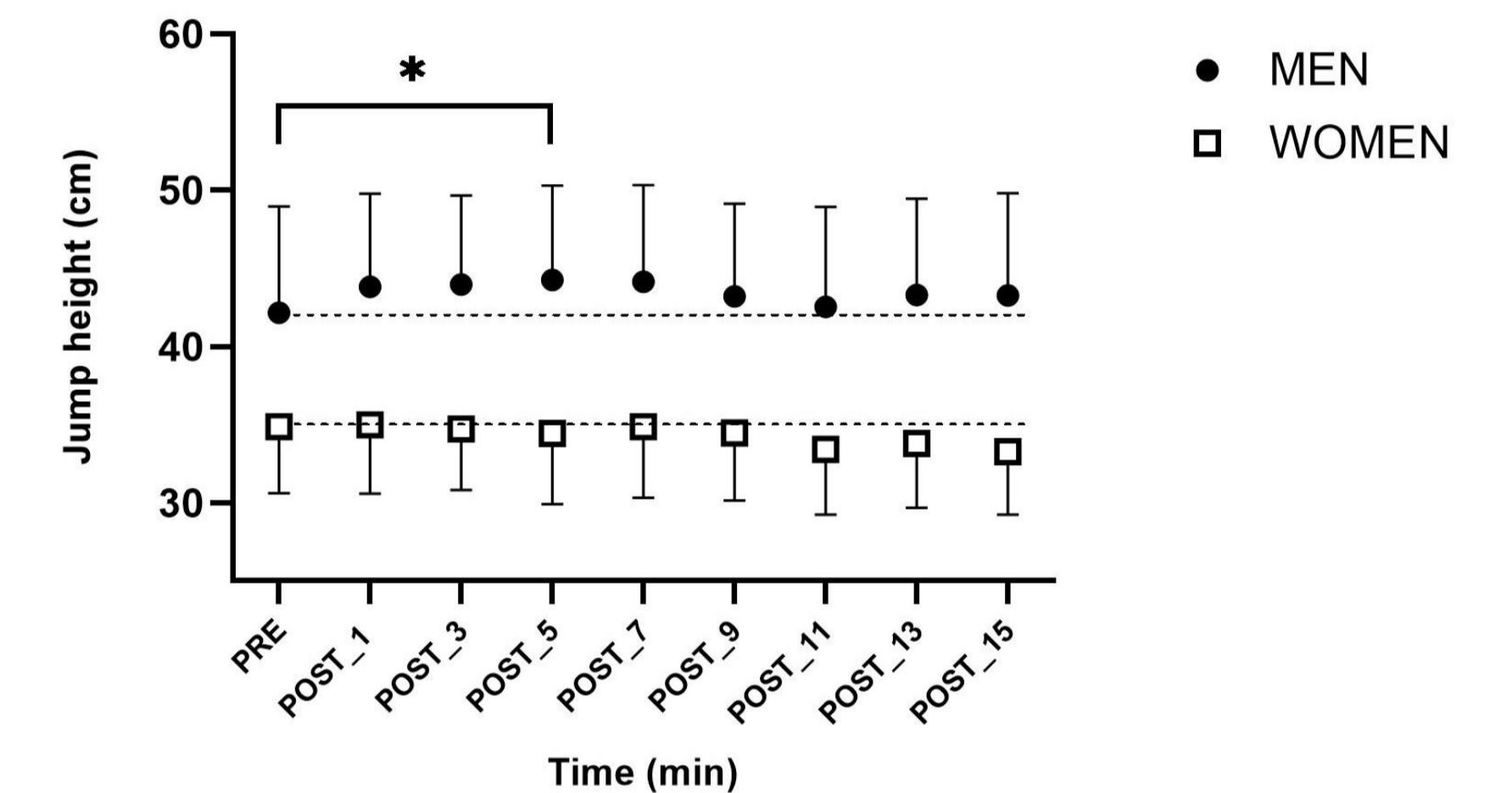


Figure 2: The subject performs a CMJ (POST) on force plates.

RESULTS

Post-hoc analyses indicated that CMJ height at POST 5 min was significantly greater than PRE in men ($p=0.018$); no significant differences between PRE and any POST time-point were found in women.



CONCLUSIONS

These findings suggest that a standard PAPE protocol could be used to increase power output in men, while its effect on women remains inconclusive. A limitation of this study is the number of participants involved.

PRACTICAL APPLICATIONS

This study highlights the limitations of current PAPE studies indicating the need to further investigate PAPE protocols in women.

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- [2] Boulosa D. Post-activation performance enhancement strategies in sport: a brief review for practitioners. *Human Movement.* 2021;22(3):101-109. doi:10.5114/hm.2021.103280.a