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### Physiological and physical responses to wearing compression garments during soccer matches and recovery

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**BACKGROUND:** There is not enough information on the effects of compression therapy in soccer players during recovery after matches. So the objective of this study was to examine the effect of wearing compression garments during soccer matches and during recovery period on physical responses.

**METHODS:** Eighteen semi-professional soccer players participated in this study. A two-stage crossover design was chosen. Participants acted as controls in one match and were assigned to an experimental group (compression stockings group, full-leg compression group, shorts group) in the other match. Participants in experimental groups played the match wearing assigned compression garments and were worn in the 3 days post-match, for 7 hours/day. Blood lactate concentration, arterial oxygen saturation of haemoglobin, perceived exertion, perceived recovery, anaerobic power (vertical jump, sprint, change of direction) and aerobic capacity (Yo-Yo Intermittent Recovery level 2) were measured. Internal and external loads were measured during both matches.

**RESULTS:** Using compression garments may slightly increase lactate during and after soccer matches and only Full-Leg garments can moderately attenuate the reduction of arterial oxygen saturation of haemoglobin. Wearing compression garments can be useful between 24-48 h post-exercise to promote psychological recovery, especially with full-leg garments and compression shorts. Decreases in anaerobic power can be attenuated but not significantly, mainly with full-leg compression garments or compression shorts. Compression garments could also have positive effect on aerobic capacity, but we cannot exclude a placebo effect.

**CONCLUSIONS:** Compression garments could be moderately beneficial, but effects are not significant.

**KEY WORDS:** Football - Metabolism - Perception - Physical performance



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