


Systematic Review | [Published: 20 January 2018](#)

Sleep Interventions Designed to Improve Athletic Performance and Recovery: A Systematic Review of Current Approaches

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Abstract

Background

Athletes experience various situations and conditions that can interfere with their sleep, which is crucial for optimal psychological and physiological recovery as well as subsequent performance. Conventional sleep screening and intervention approaches may not be efficacious for athletes given their lifestyle, the demands of training and travel associated with interstate/international competition.

Objectives

The present systematic review aimed to summarize and evaluate sleep intervention studies targeting subsequent performance and recovery in competitive athletes. Based on the findings, a secondary aim was

to outline a possible sleep intervention for athletes, including recommendations for content, mode of delivery and evaluation.

Methods

A systematic review was conducted based on the PRISMA guidelines in May 2016 with an update completed in September 2017. Ten studies met our inclusion criteria comprising a total of 218 participants in the age range of 18–24 years with athletes from various sports (e.g., swimming, soccer, basketball, tennis). A modified version of the quality assessment scale developed by Abernethy and Bleakley was used to evaluate the quality of the studies.

Results

The included studies implemented several sleep interventions, including sleep extension and napping, sleep hygiene, and post-exercise recovery strategies. Evidence suggests that sleep extension had the most beneficial effects on subsequent performance. Consistent with previous research, these results suggest that sleep plays an important role in some, but not all, aspects of athletes' performance and recovery.

Conclusion

Future researchers should aim to conduct sleep interventions among different athlete populations,

compare results, and further establish guidelines and intervention tools for athletes to address their specific sleep demands and disturbances.

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Contributions

Daniel Bonnar, Kate Bartel, Christin Lang, and Naomi Kakoschke conceived and designed the study. Daniel Bonnar and Kate Bartel performed the literature search, were responsible for decisions on inclusion/exclusion of articles, quality assessment and data extraction (with Christin Lang as the

decider if there was disagreement). Naomi Kakoschke drafted and critically revised the study. Christin Lang and Daniel Bonnar wrote the Introduction section; Kate Bartel wrote the Methods section; Daniel Bonnar, Christin Lang, and Kate Bartel wrote the Results section; Daniel Bonnar, Kate Bartel, Christin Lang, and Naomi Kakoschke wrote the Discussion section.

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Ethics declarations

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Conflict of interest

Daniel Bonnar, Kate Bartel, Naomi Kakoschke, and Christin Lang declare that they have no conflicts of interest relevant to the content of this review.

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