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Candace Dubetz

Bowling Green State University, dubetzc@bgsu.edu

Andrea Cripps

Bowling Green State University, acripps@bgsu.edu

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Sleep Deprivation Affecting Athletic Performance

Candace DuBetz, Andrea E. Cripps, PhD, ATC

Human Movement, Sports, and Leisure, Bowling Green State University

CLINICAL SCENARIO

Many college students endure long days of attending courses, completing homework, participating in extracurricular activities, and trying to maintain a social life all while getting minimal hours of sleep. College athletes are then tasked with performing their sport at optimal levels.

FOCUSED CLINICAL QUESTION

Is there evidence to suggest that athletic performance is altered due to sleep deprivation?

SUMMARY OF SEARCH

The literature was searched for research studies of level II evidence or higher that investigated the affects of sleep on performance in various athletes. Four cross-sectional studies were integrated. Two of these published studies^{1,4} specifically evaluate college athletes and the affects of sleep deprivation on their athletic performances.

CLINICAL BOTTOM LINE

There is moderate evidence to suggest that variation exists in literature related to sleep deprivation and athletic performance, but overall we can come to one general conclusion; short-term sleep deprivation has no effect on actual anaerobic athletic performance and has adverse affects on cognitive function such as reaction time.

Long-term sleep deprivation, however, does have a negative effect on athletic performance including decreases in muscle strength, muscle power, mean sprint times, muscle glycogen concentration, and self-paced exercise. Contrarily, increased hours of sleep has positive benefits on athletic performance such as a faster timed sprint and related sport-specific exercise. Overall, for athletes to perform at optimal levels it is essential they get adequate, if not, extra sleep.

STRENGTH OF RECOMMENDATION

There is level B evidence that decreased hours of sleep negatively affects optimal athletic performance, whereas, increased hours of sleep positively affects optimal athletic performance.

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