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## Sleep Deprivation Affecting Athletic Performance

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## ***Sleep Deprivation Affecting Athletic Performance***

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### ***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<sup>1,4</sup> 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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**KEY WORDS:** *athletes, sleep deprivation, performance*