

# Sleep extension improves response time, reduces fatigue in professional baseball players

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Preliminary results from a new study suggest that short-term sleep extension improves response time and daytime functioning of professional baseball players.

Results show that after five nights of sleep [extension](#), professional baseball players from an MLB organization demonstrated a 13-percent improvement on a cognitive processing speed test by reacting 122 milliseconds faster. They also responded 66 milliseconds faster on a test of selective attention when confronted with distractors. According to the authors, a fastball takes approximately 400 milliseconds to travel from the pitcher to the hitter, requiring batters to have optimal visual search strategies to distinguish and react to different types of pitches.

"Our research indicates that short-term sleep extension of one additional hour for five days demonstrated benefits on athletes' visual search abilities to quickly respond when faced with distractors," said lead author Cheri D. Mah, MS, research fellow at the University of California San Francisco Human Performance Center.

The research team led by Mah conducted a randomized, controlled trial during a 4-week training camp. Seventeen professional baseball players from an MLB organization completed a two-day baseline of habitual sleep. Athletes then were randomized to either five nights of sleep extension or five nights of habitual sleep. Pre- and post-cognitive tests

included the Digit Symbol Substitution Task (DSST) and an adaptive [visual search](#) task. Mood and daytime sleepiness were evaluated with the Profile of Mood States (POMS) and Epworth Sleepiness Scale.

In the sleep extension group, the objective, estimated [sleep duration](#) measured by actigraphy increased by 0.6 hours per night from 6.3 to 6.9 hours. Assessments of fatigue, tension, and [daytime sleepiness](#) all decreased by more than one-third after sleep extension.

"Fatigue over a season can negatively impact performance and possibly pitch recognition," said Mah. "These findings suggest that short-term sleep loading during periods of high training volumes may be a practical recovery strategy and fatigue countermeasure that has daytime performance benefits."

The research abstract was published recently in an [online supplement of the journal \*Sleep\*](#) and will be presented Monday, June 5, in Boston at SLEEP 2017, the 31st Annual Meeting of the Associated Professional Sleep Societies LLC (APSS), which is a joint venture of the American Academy of Sleep Medicine and the Sleep Research Society.

In a previous study published in the journal *Sleep*, Mah found that a 5-7 week sleep extension period was associated with improvements in specific measures of basketball performance among collegiate athletes.

**More information:** Abstract Title: Sleep Loading Improves Visual Search Response Time and Reduces Fatigue in Professional Baseball Players

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Presentation Date: Monday, June 5

Oral Presentation: 10:30 a.m. to 10:45 a.m., room 304/306

Poster Presentation: 5 p.m. to 7 p.m., board 223

Presenter: Cheri Mah, MS

Provided by American Academy of Sleep Medicine

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