

Getting extra sleep improves the athletic performance of collegiate football players

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Getting extra sleep over an extended period of time improves athletic performance, alertness and mood, according to a research abstract that will be presented Tuesday, June 8, 2010, in San Antonio, Texas, at SLEEP 2010, the 24th annual meeting of the Associated Professional Sleep Societies LLC.

Results indicate that football players' sprint times improved significantly after seven to eight weeks of sleep extension. Average sprint time in the 20-yard shuttle improved from 4.71 seconds to 4.61 seconds, and the average 40-yard dash time decreased from 4.99 seconds to 4.89 seconds. [Daytime sleepiness](#) and fatigue also decreased significantly, while vigor scores significantly improved.

"Sleep duration may be an important consideration for an athlete's daily training regimen," said lead author Cheri Mah of the Stanford [Sleep Disorders](#) Clinic and Research Laboratory in Stanford, Calif.

"Furthermore, sleep extension also may contribute to minimizing the effects of accumulated [sleep deprivation](#) and thus could be a beneficial strategy for optimal performance."

The study involved seven healthy students on the Stanford University football team. Their ages ranged from 18 to 22 years, and they played a variety of positions on the team. Participants maintained their habitual sleep/wake schedule for two weeks at the beginning of the season to establish their baseline measures.

"These athletes began their competitive season with moderate levels of daytime sleepiness and fatigue," said Mah.

Then the participants extended their sleep for seven to eight weeks during the season, obtaining as much sleep as possible and aiming for a minimum of ten hours of sleep each night. The 20-yard shuttle and 40-yard dash drills, which are used to measure performance at the annual National Football League Scouting Combine, were conducted after every regular practice. The Profile of Mood States (POMS) was administered once a week to monitor changes in mood, and daytime sleepiness was assessed using the Epworth Sleepiness Scale. Participants also completed daily sleep journals, and their daily sleep/wake activity was monitored by actigraphy.

"By substantially increasing sleep duration, athletes experienced a decrease in both daytime sleepiness and fatigue and increase in vigor towards the end of their season," said Mah.

The results support Mah's previous research at Stanford involving men and women who compete in other sports such as basketball, golf, cross country, and track and field. Last year at SLEEP 2009, she reported that five members of the women's tennis team had faster sprint times and better hitting accuracy after a period of sleep extension. At SLEEP 2008 she reported that sleep extension helped five members of the swim team swim faster, react quicker off the blocks, turn faster and increase their kick strokes.

Mah noted that although traditional athletic training regimens typically focus on multiple aspects of physical training, few prioritize adequate sleep as an important component. She offered these tips to help athletes improve their performance by maximizing their sleep:

- Make sleep a part of your regular training regimen.
- Extend nightly sleep for several weeks to reduce your sleep debt before competition.
- Maintain a low sleep debt by obtaining a sufficient amount of nightly sleep (seven to eight hours for adults, nine or more hours for teens and young adults).
- Keep a regular sleep-wake schedule, going to bed and waking up at the same times every day.
- Take brief naps to obtain additional sleep during the day, especially if drowsy.

Provided by American Academy of Sleep Medicine

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