

Sports Medicine Monthly

Editor: Darren H. Lunow, M.Ed, ATC, LAT • Certified Athletic Trainer

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Sleep: A Forgotten Advantage in Athletics

In the modern version of athletic competition, athletics has become a year round endeavor for most athletes. Even those who have chosen to only compete in one sport are finding ways to be active year round. By maintaining or increasing their levels of physical fitness and improving their overall technique during the 'off season', athletes are hopeful to see subsequent improvements in competition performance 'in season.'



Now while no one would believe that 'off season' training is anything new to the world of athletics, many would acknowledge that the length of the 'off season' is continuing to increase. In many high schools today, a sophomore may compete in a football season, and then during his 'off season', may very well be competing in basketball, track and field, wrestling, or some combination of the above. After the school year, he is usually immersed in athletic camps, summer leagues, or some other form of athletic competition; all during his football 'off season.' This scenario typifies athletes today who usually utilize the 'off season' of their primary sport, to compete in other activities. The goal being that the athlete can gain an edge over his or her competition by outworking the competition in the 'off season'.

With so many athletes continuously looking for areas where they may improve in strength, flexibility, cardiorespiratory fitness, etc... many high school athletes have overlooked one of the most important, and most inexpensive, methods by which they may gain that competitive edge: sleep. *continued on page 2*

Supplements and Steroids

Information Re-printed from the Journal of Medicine and Science in Sports and Exercise

- *71.2% of the adolescents surveyed reported usage of at least one supplement with the most popular including multivitamins and high-energy drinks
- *The usage of supplements to increase body mass and strength, and to reduce body fat or mass, was more prevalent in males than females.
- *For all grade levels; 8th–12th, students noted that their primary source of education regarding nutrition was their teachers.



The Study's Final Conclusion:

"The apparent willingness of adolescents to use a supplement that may harm their health or shorten their life highlights the need for greater involvement of teachers, coaches, and physicians to provide continued education on the risks and benefits associated with nutritional supplementation and anabolic steroid use."

Did You Know.....

- 32 Certified Athletic Trainers Traveled with the United States Olympic Teams to Beijing in 2008!
- A recent study published in the Journal of Athletic Training noted that there was "no increased incidence of ankle sprains" when comparing the traditional heel counter of a basketball high top vs. the "cushioned column system" developed by providers such as Nike.
- Wounds covered with occlusive dressings are less likely to sustain infection and more likely to heal faster.



R. Clio Robertson, MD
Don L. Hawkins, MD
David R. Hicks, MD
Michael W. Tanner, MD
Brian C. Howard, MD
James D. Cash, MD

David E. Nonweiler, MD
Randall L. Hendricks, MD
David K. Wong, MD
Bryan J. Hawkins, MD
Perry D. Inhofe, MD
Thomas G. Craven, MD

Jeffrey R. Morris, DO
Ronald S. LaButti, DO
Jeff A. Fox, MD
Kathleen M. Sisler, MD
Troy A. Glaser, DO

Tulsa: 918.481.CSOS (2767) • Statewide: 888.269.CSOS (2767) • www.csosortho.com

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*The following information is adapted from
"The ZZZ Factor, published in the October 2008 Edition of
Training and Conditioning Magazine.

"sleep duration directly correlates to recovery"

*Research shows that when external distractions (i.e. stress, scheduling, alarm clocks, etc...) are removed, the average adult will sleep for about 8 hrs while the average teenager/ college aged individual will sleep for 9 hrs.

*There are five stages of sleep and a person must progress through stage one before they will progress further.

*Stages three and four (deep sleep) is when human growth hormone is released for healing and restoration; both mentally and physically.

"The sleep deprived athlete will be out-performed by those who are well rested."

*Reaction time, stress level, alertness, irritability, and overall energy are all negatively affected by sleep deprivation.

*Sleep deprivation accumulates over time. Individuals who are limited to only 4-6 hours of sleep a night perform at the same cognitive level as those who haven't sleep for 48 hrs.

*Proper rest increases one's ability to learn and recall motor skills proficiently. (i.e. pitching, hitting, offenses, defenses, etc...)

By encouraging our athletes to improve their sleeping habits, we are not only assisting their bodies during the regular adolescent growth process, but we are also increasing their ability to compete academically and athletically, while gaining the edge over their opponent that they are so diligently seeking.



Got a Question???

Ask Your Athletic Trainer:

dhlunow@csosortho.com
herb.rhea@jenksps.org
sfriebus@bixbyps.org
jmansfield@hollandhall.org
fkerns@metroca.com



Question of the Month:

How do energy drinks work, if they actually do?

Most of the popular energy drinks (i.e. RedBull, BooKoo, Full Throttle, Monster, and Nos) contain a large quantity of caffeine, a stimulant, sugar, a source of energy, and Taurine, an amino acid. This amino acid is normally produced by the liver and is useful with the digestion of food in the small intestine. It has been shown to aid in neurological development, help regulate the levels of water and salts in the blood, and assist in the maintenance of skeletal and cardiac muscle. While most energy drinks contain appx. 1000mg of taurine, 3,000 is about the daily limit, and these quantities are usually achieved through a proper diet of meat and fish. Any excess is simply excreted by the kidneys. With regards to energy boosts, the clinical effects of taurine remain questionable.



For the most part, energy drinks are loaded with sugars, for a quick boost of energy, and caffeine, which gives the perception of increased energy by actually reducing the sensation of being tired. In short, it is a quick fix for a lack of nutrition and a lack of sleep. This is most likely the reason why they are so popular.

In summary, energy drinks give you the flavor of a soda with the stimulants of a coffee. Same basic ingredients, just in a new package.

A Note to the Reader.....

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