



@physicaltherapyresearch

RAPID RESEARCH

May 2021

Inside This Week: Sleep for Better Performance

-
- ✓ Sleepiness & the Risk of Sports-Related Concussions

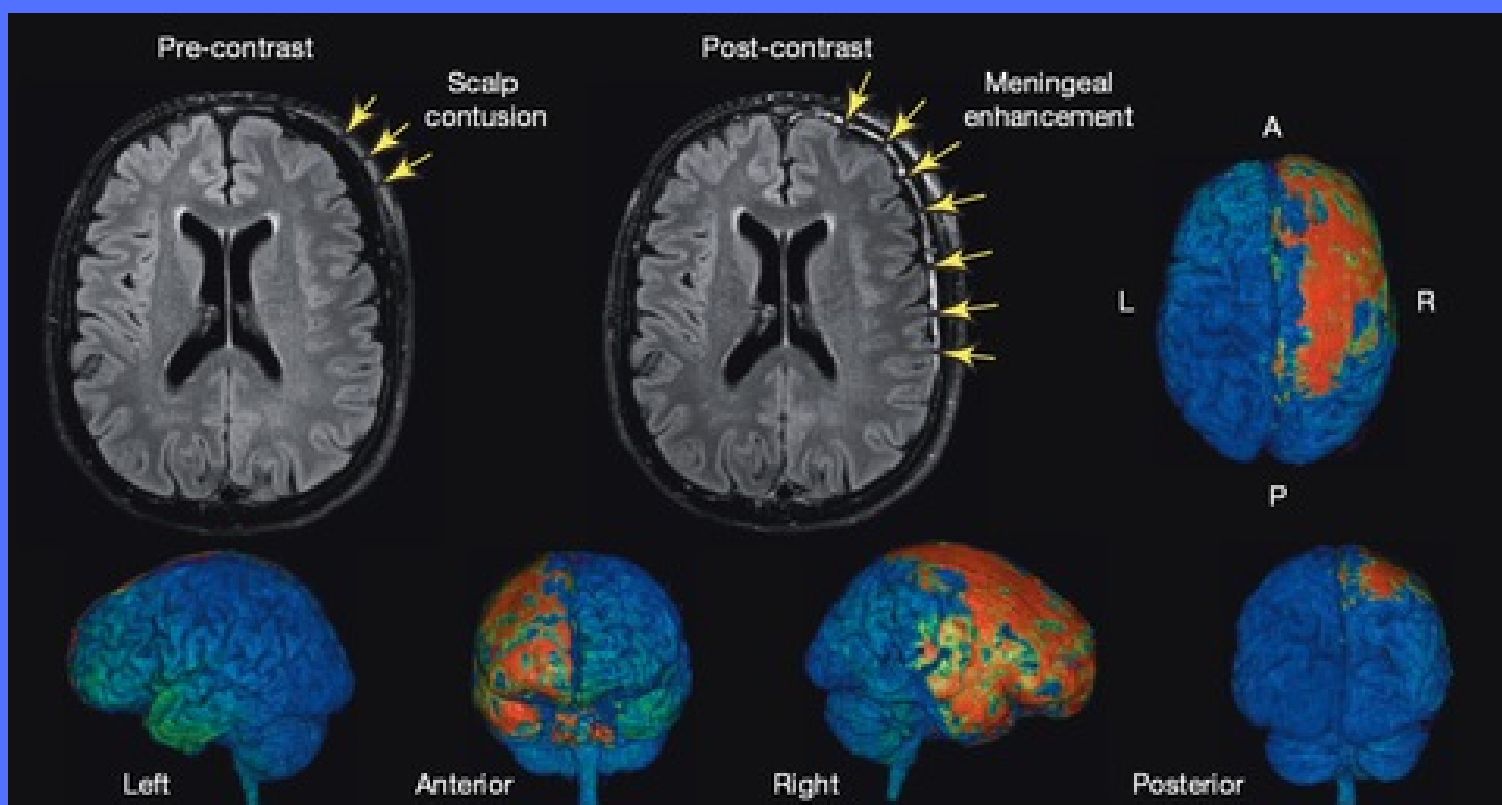
 - ✓ Sleep for Athletes: Expert Recommendations

 - ✓ Sleep Hygiene to Optimize Recovery in Athletes



SLEEPINESS & RISK OF SPORTS-RELATED CONCUSSIONS

This study quantified the effect of poor sleep quality and insomnia symptoms on future sports-related concussion risk, as poor quality sleep is associated with impaired cognitive, motor, and behavioral components of sport performance and increased injury risk.



KEY FINDINGS

190 NCAA Division-1 athletes completed a survey battery, including:
Insomnia Severity Index (ISI).

National Health and Nutrition Examination Survey (NHANES) Sleep module.

Individual factors associated with **sustaining a sports concussion** included:

Prior **history of concussion**.

Participating in **high-prevalence sports**.

Moderate-to-severe **insomnia** via the **ISI (scores 15)**.

Experiencing excessive **daytime sleepiness** >2 days/mo via the NHANES.

Fatigue was **not associated**.

MAIN TAKEAWAYS

Moderate-to-severe insomnia and daytime sleepiness, are independently associated with an increased risk for sports-related concussions.

Proactive measures should be taken to improve athletes' sleep to reduce sports-related concussion risk and improve overall performance.

SLEEP FOR ATHLETES: EXPERT RECOMMENDATIONS

This expert consensus uses the best evidence to provide a sleep toolbox for practitioners to mitigate risk factors and optimize athlete sleep.



KEY RECOMMENDATIONS

Night-time sleep quantity

A range of 7–9 hours for healthy adults and 8–10 hours for teenagers; however, depending on demands, some athletes need more.

Daytime sleep quantity (naps)

Naps can improve athlete's alertness, concentration, motor performance and mood.

Good sleep hygiene

Habits necessary to have good sleep quality and daytime alertness, including:

Avoiding stimulants (eg, caffeine), alcohol, and heavy meals near bedtime.

Adequate exposure to natural light in the morning.

Not lying in bed awake for long periods of time,

Having a relaxing bedtime routine.

Having a sleep environment conducive to sleep which is cool, dark and quiet.

CONTINUED

Sleep and train in-line with chronotype

Athletes are commonly morning chronotypes ('larks') but those who are night owls struggle more with their sleep. When possible, avoiding training times early in the morning and late at night allows ample opportunity for sleep and recovery.

Caution when using sleep monitors

Some athletes may become preoccupied with their sleep monitor data, which may increase anxiety around sleep and result in worse sleep.

Practitioners must weigh both the pros and cons of using sleep monitoring technology for the athletes they are working with.

SLEEP HYGIENE TO OPTIMIZE RECOVERY IN ATHLETES

This review summarized both the detrimental effects of sleep deprivation in athletes and benefits of sleep extension on athletic performance, including reaction time, accuracy, strength, endurance, and cognitive function

SLEEP DEPRIVATION plays a major role in a variety of conditions and illnesses.



Decreased alertness



Increased appetite



Increased stress



Cognitive impairment

REDUCING SLEEP BY

90 MINUTES

FOR JUST ONE NIGHT CAN REDUCE
DAYTIME ALERTNESS BY UP TO

32% 

UNTREATED SLEEP DISORDERS CAN HAVE LONG-TERM EFFECTS



High blood
pressure



Heart
failure



Stroke



Obesity

GIVE US YOUR FEEDBACK!

MEMBERS

We are on a mission to make research more accessible, easier to interpret, and quicker to implement.

Help us by giving 1 minute of your time to leave feedback for us.

We would greatly appreciate any feedback you have, as it helps us continually improve!

[Leave Review](#)

