

Importance of Sleep for Athletes

Sleep is essential for many reasons including emotional regulation, cognitive performance, physical capacity, and recovery (Venter, 2012). Sleep can be defined as, “a state that is characterized by changes in brain wave activity, breathing, heart rate, body temperature, and other physiological functions” (Harvard Medical School Division of Sleep Medicine, 2021). Although researchers have not identified a single primary function of sleep, they have established that sleep provides numerous restorative benefits.

While 7–9 hours of sleep per night is commonly recommended for adults, many athletes still do not meet the minimum. Sargent et al. (2021) reported that 71% of elite athletes failed to meet the estimated sleep requirement of 8.3 hours per night. Research suggests that athletes who consistently obtain more sleep often experience improvements in physical performance, motor skill execution, reaction time, and mood (Sargent et al., 2021).

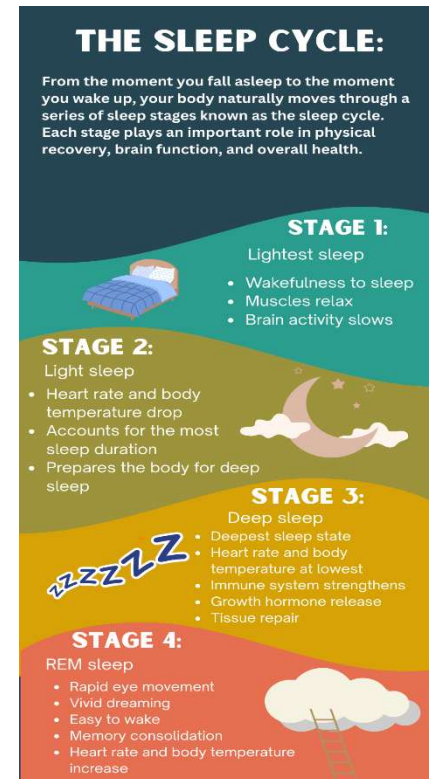
One notable study conducted at Stanford University examined the effects of sleep extension in members of the men's varsity basketball team. Athletes were instructed to aim for at least 10 hours of sleep per night over a period of 5–7 weeks. Notable conclusions saw improvements across many performance measures including sprint speed, free throw accuracy, reaction time, and overall mood (Mah et al., 2011).

It is important to note that sleep quality is also crucial for an athlete's recovery. Many of the body's most important physiological and psychological recovery processes occur during deep sleep and REM sleep. In order to maximize these benefits, athletes should maintain healthy sleep habits that allow the body to progress through each stage of the sleep cycle. During deep sleep, the body's metabolic activity decreases and restorative processes like tissue repair, energy conservation, and growth hormone release become more active. Poor sleep hygiene can reduce the amount of time spent in deep sleep, limiting an athlete's ability to fully recover from training and competition. The REM (rapid eye movement) stage of sleep causes brain activity to increase, supporting memory

consolidation, learning, emotional regulation, and problem-solving (Walters, 2002; Loehr & Schwartz, 2005). For athletes learning new skills or tactics, this stage of sleep can be particularly beneficial.

Athletes can better utilize sleep as a recovery tool by following simple habits like having consistent sleep/wake times, limiting screen use before bed, and establishing a relaxing nighttime routine. By prioritizing sleep, athletes can enhance recovery, support long-term development, and improve overall sport performance (Venter, 2012).

In addition to the correlations with performance and recovery, quality sleep can reduce injury risk. Sleep deprivation has been associated with greater injury risk. Ensuring athletes consistently practice proper sleep hygiene can mitigate some of these risk factors. Adequate sleep before competition enables athletes to be physically and mentally sharper with less fatigue (Milewski et al., 2014). By maintaining proper sleep habits, athletes can optimize recovery, reduce injury risk, and perform at their highest potential.



References:

- Bird, S. P. (2013). Sleep, Recovery, and Athletic Performance. *Strength and Conditioning Journal*, 35(5), 43–47. <https://doi.org/10.1519/ssc.0b013e3182a62e2f>
- Cunha, L. A., Costa, J., Marques, E. A., Brito, J., Lastella, M., & Figueiredo, P. (2023). The Impact of Sleep Interventions on Athletic Performance: A Systematic Review. *The Impact of Sleep Interventions on Athletic Performance: A Systematic Review*, 9(1). <https://doi.org/10.1186/s40798-023-00599-z>
- Harvard Medical School. (2021, October 1). *Why Sleep Matters: Benefits of Sleep*. [Sleep.hms.harvard.edu](https://sleep.hms.harvard.edu). <https://sleep.hms.harvard.edu/education-training/public-education/sleep-and-health-education-program/sleep-health-education-41>
- Mah, C. D., Mah, K. E., Kezirian, E. J., & Dement, W. C. (2011). The Effects of Sleep Extension on the Athletic Performance of Collegiate Basketball Players. *Sleep*, 34(7), 943–950. <https://doi.org/10.5665/sleep.1132>
- Samuels, C. (2008). Sleep, Recovery, and Performance: The New Frontier in High-Performance Athletics. *Neurologic Clinics*, 26(1), 169–180. <https://doi.org/10.1016/j.ncl.2007.11.012>
- Sargent, C., Lastella, M., Halson, S. L., & Roach, G. D. (2021). How Much Sleep Does an Elite Athlete Need? *International Journal of Sports Physiology and Performance*, 16(12), 1–12. <https://doi.org/10.1123/ijsspp.2020-0896>
- Venter, R. E. (2012). Role of Sleep in Performance and Recovery of Athletes: A Review Article. *South African Journal for Research in Sport, Physical Education and Recreation*, 34(1), 167–184. <https://www.ajol.info/index.php/sajrs/article/view/76882>