

SLEEP & SPORT

go hand in hand

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WHAT IS A GOOD NIGHT'S SLEEP?

7-9h*

For an adult

*Sleep duration recommended by the French Ministry of Health

8-10h*

For a teenager

9-11h*

For a child (from 6 to 12)

Sleep duration recommended by the French Ministry of Health

The quality of sleep must also be considered, as much as its duration. Specialists agree that we have slept well when at least 85% of the time spent in bed is converted into sleep, and if the time spent falling asleep lasts no more than 30 minutes.



Sleeping well also means having a night's sleep that comprises **4 to 6 sleep cycles of around 90 minutes each**. A sleep cycle contains a phase of slow wave sleep, including light and deep slow wave sleep, and a phase of REM sleep, during which we dream.



When it comes to sports, sleep is essential for recovery

A good night's sleep improves **muscle recovery** and helps the body prepare for the next effort

Phases of deep slow-wave sleep are essential, as they promote the **secretion of growth hormone**, which enables muscle healing.

Useful for preventing and healing injuries more quickly!

Physical activity is a real remedy for sleep disorders.

Sport triggers the release of hormones such as **dopamine**, which contributes to a feeling of well-being and relaxation, essential for reducing stress. Sport also helps to regulate body temperature, which in turn promotes **quality sleep**.

Hyperthermia, caused by physical exercise, triggers **physiological thermoregulation mechanisms**, during and after exercise, to lower body temperature, which can promote sleep.

Finally, sport has an effect on the **"internal clock"**, and can promote regular sleep/wake rhythms.

ADVICE FROM FRENCH NATIONAL INSTITUTE OF SPORT RESEARCHERS

How to combat the effects of jet lag? Matthieu Nédélec, a researcher in Physiology Applied to High-Level Sport, and Maxime Chauvineau, a former doctoral student in Sleep and Recovery, are conducting research at INSEP into "sleep for performance" to help top-level athletes improve their sleep

In the case of major time shifts, they recommend that athletes:

- Plan ahead, for example, by getting more sleep the days before
- Use synchronizers to mitigate the effects of jet lag, by adjusting light (using dawn and blue light simulators), modifying nutrition to promote the production of melatonin, the sleep hormone, and shifting sports practice times to modify the internal clock.



*Insomnia occurs when you have difficulty falling asleep, when you wake up frequently and for long periods at night, and when you wake up prematurely and can't get back to sleep. Symptoms recur several times a week, over successive weeks.

Do's

Take up gentle exercise (yoga, pilates, walking) to reduce anxiety, one of the causes of insomnia

Play sports even when you're feeling tired (especially in winter), as sport gives you energy

Take a 30-minute nap between 1 and 3 p.m. to promote recovery

Don'ts

Avoid sports at least two hours before bedtime (over-excitement and high body temperature impair sleep)

Force yourself to do sport in the morning, when you wake up, if you're not an early riser. Sport can be practised in the morning, afternoon or evening, with similar effects on sleep quality

BEST PRACTICE FROM EUROPEAN PARTNERS

The National Sports Academy in Bulgaria has a specialized sleep laboratory and works in partnership with one of Bulgaria's leading somnology centers, where athletes and students can register to have their sleep analyzed.

The Academy's somnology experts, **Dr. Krasimir Rankov** and **Dr. Milena Nikolova**, have conducted research and published numerous articles on sleep and its dysfunctions in different sports.

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