

Potential non-pharmacological means for promoting sleep quality and/or quantity

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Ensuring athletes achieve an appropriate quality and/or quantity of sleep may have significant implications on performance and recovery and reduce the risk of developing overreaching or overtraining. Indeed, sleep is often anecdotally suggested to be the single best recovery strategy available to elite athletes.

A number of nutritional factors have been suggested to improve sleep, including valerian, melatonin, tryptophan, a high glycemic index diet before bedtime and maintaining a balanced and healthy diet.

Conversely, consumption of alcohol and caffeine and hyper-hydration may disturb sleep.

Other strategies such as warming the skin, hydrotherapy and utilisation of appropriate sleep hygiene (maintenance of good sleep habits and routines) are other tools to aid in sleep promotion.

Ensuring athletes gain an appropriate quality and quantity of sleep may be important for optimal athletic performance.

- Ensure appropriate recovery (physical, nutritional and psychological) from training and competition.
- Consume tryptophan containing foods such as milk, meat, fish, poultry, eggs, beans, peanuts, cheese and leafy green vegetables.
- Consume a high glycemic index meal 4 hours before bedtime.
- Consume a balanced, healthy diet.
- Minimise alcohol intake prior to bedtime.
- Minimise caffeine intake prior to bedtime (individual tolerances do exist).
- Be cautious of fluid intake following completion of training/competition and bedtime.
For athletes who are repeatedly waking at night to use the bathroom, hydration testing and fluid balance assessment may be useful to prescribe type and quantity of fluid both during the day and during the recovery period.
- Skin warming (in cool environmental conditions) - this can be achieved through prior warm baths/ spa baths, hot footbaths, warm blankets and wearing of socks.
- Skin cooling (in warm environmental conditions) - this can be achieved through cool showers, the appropriate use of air-conditioning.
- Sleep hygiene- the following sleep hygiene strategies are commonly recommended:
 - Never try to sleep- if you cannot sleep within 15 minutes, get out of bed and try another strategy.
 - Eliminate the bedroom clock.
 - Avoid coffee, alcohol and nicotine.
 - Regularise the bedtime.
 - Be conscious of food and food intake.
 - Nap appropriately (for no more than 45 minutes and not late in the afternoon)

Explore the use of muscle relaxation and cognitive relaxation strategies.