



Sleep Hygiene

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- **Sleep hygiene** is a group of recommendations or interventions focused on **improving sleep quantity and quality**. Improvements in sleep hygiene are easy to apply and can improve issues such as insomnia.
- **Poor sleep** is linked to negative physiologic consequences such as worsened cognitive function, attention lapses, reduced memory capacity, depressed mood and physiologic derangements in endocrine and metabolic function and inflammatory changes.
- **Chronic sleep deprivation** of less than seven hours per night causes cognitive dysfunction comparable to a night or two of total sleep deprivation.
- The concept of “best sleep” will **vary based on individual factors** such as current sleep debt, tolerance of schedule variability, caffeine tolerance, age, genetics, and chronotype (circadian typology). Sleep hygiene recommendations are best considered with an individualistic approach; what works for one person may not be as beneficial for another.
- Classical sleep hygiene recommendations suggest that consistency is key with respect to bedtime and wake time; however, this is not strongly supported by evidence, **and it is most important to aim for a seven-plus hour block of sleep**. Consistent bed and wake times are difficult to achieve for shift workers. Some individuals will be more tolerant of variable sleep-and-wake times than others.

Table 1: Tips to improve sleep hygiene

Domain	Recommendation
Total sleep time	Target bedtime at least 7-8 hours before you will need to be awake
Sensory disruptions	Deploy light-reducing and noise-reducing strategies such as blackout curtains and white noise applications or devices
Bedroom function	Use the bedroom for sleep only (e.g., no television viewing in bedroom). If unable to sleep, perform a relaxing task elsewhere and return to bed when drowsy
Temperature	Maintain the thermostat at a cool, comfortable sleeping temperature
Bedtime routine	Perform a relaxing bedtime routine such as bathing, light reading, journaling
Substances	Avoid afternoon caffeine as well as smoking, alcohol, and heavy meals prior to bedtime. Moderate morning caffeine consumption is usually not deleterious for most habitual caffeine-using individuals
Exercise	Get daily physical activity
Napping	Most research supports that daytime naps or “strategic napping” to reduce fatigue do not have significant impact on later nighttime sleep. Find what nap schedule works best for an individual without leading to reduced nighttime sleep.
Lighting	Avoid bright light (especially blue light) at night; one can adjust smart phones to have “warm” lighted displays in the evenings <ul style="list-style-type: none"> ○ iPhone: settings → display and brightness → night shift ○ Android: settings → display → night mode

Resources:

https://www.cdc.gov/sleep/about_sleep/sleep_hygiene.html

<http://sleepeducation.org/essentials-in-sleep/healthy-sleep-habits>

Sources:

1. Banks S; Dinges DF. Behavioral and physiological consequences of sleep restriction. *J Clin Sleep Med* 2007;3(5):519-528.
2. Carter B, Rees P, Hale L, Bhattacharjee D, Paradkar MS. Association Between Portable Screen-Based Media Device Access or Use and Sleep Outcomes: A Systematic Review and Meta-analysis. *JAMA Pediatr.* 2016 Dec 1;170(12):1202-1208. doi: 10.1001/jamapediatrics.2016.2341. PMID: 27802500; PMCID: PMC5380441.
3. Chou TL, Chang LI, Chung MH. The mediating and moderating effects of sleep hygiene practice on anxiety and insomnia in hospital nurses. *Int J Nurs Pract.* 2015 May;21 Suppl 2:9-18. doi: 10.1111/ijn.12164. PMID: 26125570.
4. Chung KF, Lee CT, Yeung WF, Chan MS, Chung EW, Lin WL. Sleep hygiene education as a treatment of insomnia: a systematic review and meta-analysis. *Fam Pract.* 2018 Jul 23;35(4):365-375. doi: 10.1093/fampra/cmz122. PMID: 29194467.
5. Irish LA, Kline CE, Gunn HE, Buysse DJ, Hall MH. The role of sleep hygiene in promoting public health: A review of empirical evidence. *Sleep Med Rev.* 2015 Aug;22:23-36. doi: 10.1016/j.smrv.2014.10.001. Epub 2014 Oct 16. PMID: 25454674; PMCID: PMC4400203.
6. Shriane AE, Ferguson SA, Jay SM, Vincent GE. Sleep hygiene in shift workers: A systematic literature review. *Sleep Med Rev.* 2020 Oct;53:101336. doi: 10.1016/j.smrv.2020.101336. Epub 2020 May 20. PMID: 32593135.