

Techniques for Better Sleep according to Matthew Walker

By Shaun Ramsden 27/9/19 (Draft)

Golden Rules: Regular sleep and wake cycle and sleep 8 hours a day (no less)

Importance of good sleep:

- 1. The true elixir of longevity and good health!**
2. Lack of, in other words less than 8 hours a day long term has links to, Alzheimer's, cancer, weight gain, heart disease, poor fertility, especially low testosterone, diabetes, DNA damage and a weakened immune system.¹
3. You need sleep after learning to essentially hit the save button. Without sleep the memory circuits of the brain do not work correctly.⁷

Techniques for better sleep and some other important points:

1. Regular sleep cycles. I.e. Wake and sleep at the same time every day, including the weekend, an occasional hour later to sleep or hour later sleep in is not harmful.¹
2. Keep your house in dim light at night (switch off half the lights in your house and dim all other lights an hour before bed). Stay away from blue lights (TV, smart phone, computers) as much as possible. Lights disrupt the release of melatonin. "We are in a dark-deprived society in this modern era and we need darkness in the evening to allow the release of a hormone called melatonin. So try to dim down half the lights in your home in the hour before bed. Stay away from screens, especially those LED screens – they emit blue light that actually puts the breaks on melatonin. And those blue-light emitting devices fool your brain into thinking that it's still daytime, even though it's night-time and you want to get to sleep."¹
3. Keep your bedroom cool, about 18.5 degrees Celsius. Your core body temperature needs to drop 2-3 degrees Fahrenheit to initiate good sleep. Sleeping cool is better than sleeping warm.¹
4. No alcohol or caffeine. Alcohol is known as a sedative. This means it knocks you out but also blocks REM sleep (REM is essential for emotional and mental health among many other things – in a study done with rats; when they were deprived of REM sleep they would die nearly as quickly as if they had total food deprivation⁵). "The presence of alcohol in the body can reduce your REM sleep, keeping you in the lighter stages of sleep. Alcohol also disrupts sleep whereby you wake up many times throughout the night, even though you may not notice. Caffeine takes 24-36 hours to get out the body. It has a 1/4 life of 12 hours."⁴
5. If you can't sleep don't stay in bed awake. You do not want to make the incorrect "association."¹

6. Sleep between 8-12 pm. Different physiology needs different times. You will know your time as you will feel sleepy. The time of night when you sleep makes a significant difference in terms of the structure and quality of your sleep. Your slumber is composed of a series of 90-minute cycles during which your brain moves from deep, non-rapid eye movement (non-REM) sleep to REM sleep. That 90-minute cycle is fairly stable throughout the night. But the ratio of non-REM to REM sleep changes. Non-REM sleep tends to dominate your slumber cycles in the early part of the night. But as the clock creeps toward daybreak, REM sleep muscles in. That's significant, because some research has suggested that non-REM sleep is deeper and more restorative than lighter, dream-infused REM sleep—though both offer important benefits. What does this have to do with the perfect bedtime? The shift from non-REM to REM sleep happens at certain times of the night regardless of when you go to bed. So if you hit the sack very late—at, say, 3 AM—your sleep will tilt toward lighter, REM-heavy sleep. And that reduction in deep, restorative sleep may leave you groggy and blunt-minded the next day. When it comes to bedtime, there's a window of several hours—roughly between 8 PM and 12 AM—during which your brain and body have the opportunity to get all the non-REM and REM shuteye they need to function optimally. Your genetic makeup dictates whether you're more comfortable going to bed earlier or later within that rough 8-to-midnight window.²

Research also shows that teenage and adolescent sleep patterns are hormonally influenced, and not behavioural quirks. In the teenage years, the hormonal response to the 24-hour daily light/dark exposure that influences circadian rhythm is altered, making adolescents physiologically yearn to stay awake later at night and to remain asleep later in the day. It turns out that adolescents have a delayed release of regular daily melatonin, which causes them to become sleepy later at night, hours after nightfall. Given the fact that teenagers have an established need for 8-10 hours of sleep per night, the delayed melatonin release that allows teenagers to fall asleep late in the day has the expected effect of predisposing them to remain asleep for longer into the late morning or early afternoon, when it is feasible.³

7. Don't exercise too late, 2 -3 hours before bed time there should be no exercise.¹
8. Don't eat heavy meals too late.¹
9. Don't nap after 3 pm. There appears to be no issue with napping before this.¹
10. Get natural sunlight exposure. Sun exposure during the day helps us to regulate sleeping patterns. Try to get outside in the natural sunlight for at least 30 minutes per day.¹
11. Sleeping pills: "Induces junk sleep, you are just knocking out your cortex, electro-physiologically, sedation is not sleep, nor, for all their ease of acquisition, are the pills harmless."⁴

12. Sleep isn't something like a bank account. You can't make it up. Less sleep during the week can't be made up by more sleep on the weekend.⁵
13. Mortality risk of short sleep: Those people sleeping 5 hours a night have a 65% higher likelihood of dying at any time.⁵
14. Don't use the snooze button. The cardiovascular response to an alarm is actually quite a stressful event to the cardiovascular system. If you are using the snooze button, you are repeatedly assaulting your cardiovascular system.⁵
15. There is some evidence to suggest that we may have been designed to have siesta around 2 pm. There is no evidence to suggest double sleep is correct (sleeping during the night, waking up do something and then going back to sleep).⁶

References

- 1 <https://fastlifehacks.com/matthew-walker-12-tips-for-good-sleep/>
- 2 <https://time.com/3183183/best-time-to-sleep/>
- 3 <https://www.neurologytimes.com/blog/teenage-circadian-rhythm>
- 4 <https://www.ft.com/content/e6ccdcac-133d-11e9-a581-4ff78404524e>
- 5 https://www.youtube.com/watch?v=IRp5AC9W_F8
- 6 <https://www.youtube.com/watch?v=X-iQHE5tdUI>
- 7 <https://www.youtube.com/watch?v=5MuIMqhT8DM>