Healthy Sleep Habits

Damon Wang

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How to Sleep Well
How much sleep do I need?

- There is no such thing as too much sleep. Additional sleep never degrades performance.
- Almost everyone needs 7-8 hours of uninterrupted sleep per 24 hours. Anything less than 7-8 hours measurable degrades performance.
- After the 10th hour awake, performance on an unpredictable-tracking task decreases by .74% each hour; people perform as well after 24 hours awake as they do with .10% blood alcohol content.[3]
- Sleep debt is accumulate: people who sleep 4 hours a night for six nights perform as poorly as people who have been awake 24 hours.
But I’m really good at all-nighters!

- People who claim to need less are usually chronically sleep deprived.
- People who claim to be able to sleep anywhere, even in noisy, well-lit areas, usually get poorer-quality sleep.
- People who claim to perform well when sleep deprived, do so because their judgment has been impaired by inadequate sleep.
- Almost everyone needs 7-8 hours of uninterrupted sleep a night. The only documented exceptions are two women sharing a genetic mutation[4], who average six hours.
When should I sleep?

▸ People with a regular sleep schedule fall asleep more easily and sleep more soundly. Students with early classes may actually benefit from waking up that early every day.

▸ Due to circadian rhythms, people who sleep during the night (11 p.m. to 7 a.m.) have the least trouble staying asleep and get the most benefit from sleeping.

▸ If 7-8 hours uninterrupted sleep is impossible, napping in the early morning, early afternoon, and late evening can help.
How can I improve quality of sleep?

▶ The ideal environment is a dark, quiet area at a comfortable temperature; if this is not possible, consider using a blindfold, ear plugs or a white noise source, and additional blankets or a fan, respectively.

▶ Avoid caffeine, nicotine, and exercise in the four to six hours before bedtime, as these all improve alertness.

▶ Avoid alcohol in the four to six hours before bedtime; even though it causes drowsiness, alcohol actually decreases duration and quality of sleep.
Consequences of Inadequate Sleep
Short-Term

**Learning difficulties** Inadequate sleep interferes with memory consolidation. People recall new information more effectively if allowed to sleep before taking the test.

**Poor mood** Inadequate sleep makes people irritable, impatient, unable to concentrate, and uninclined to work.

**Impaired decision-making** Inadequate sleep impairs the ability to process information and make decisions[1]. People who are short on sleep will work more slowly and make more mistakes.
Weight gain  Inadequate sleep alters carbohydrate metabolism and leptin levels[8]. People who are often short on sleep are at risk for obesity[5].

Poor health  Inadequate sleep upregulates markers of inflammation[6] and depresses the immune system[2]. People who are often short on sleep are more likely to catch the cold and slower to recover from it[6].

General references for this section:  [7]
How to Recover from Inadequate Sleep
Effective Strategies

- The only effective way to recover from inadequate sleep is more sleep.
- After up to 72 hours without sleep, most people can recover completely by sleeping for twelve hours at night.
- After a longer period of some sleep, people may need several days of 7-8 hours’ sleep at night.

References: [1]
The only effective way to recover from inadequate sleep is to sleep.

Alertness-enhancing drugs (e.g., caffeine, amphetamines, Modafinil/Provigil) do not promote recovery and are not a substitute for sleep.

“Storing sleep” in advance does not work except by reducing existing sleep debt.

If traveling across time zones, it is difficult and ineffective to start sleeping and waking according to the destination time zone.
### Caffeine Content of Common Foods

<table>
<thead>
<tr>
<th>Food</th>
<th>Caffeine</th>
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<tbody>
<tr>
<td>12 oz. Soda</td>
<td>40-55 mg</td>
</tr>
<tr>
<td>12 oz. Mountain Dew</td>
<td>54 mg</td>
</tr>
<tr>
<td>12 oz. Jolt cola</td>
<td>71 mg</td>
</tr>
<tr>
<td>1 oz. Espresso</td>
<td>40-75 mg</td>
</tr>
<tr>
<td>8 oz. brewed coffee</td>
<td>95-200 mg</td>
</tr>
<tr>
<td>16 oz. Starbucks Pike Place brewed</td>
<td>330 mg</td>
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</tbody>
</table>

For a more comprehensive tabulation, see [http://www.mayoclinic.com/health/caffeine/AN01211](http://www.mayoclinic.com/health/caffeine/AN01211) and [www.energyfiend.com](http://www.energyfiend.com)
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