

# Negative Effects of All-Nighters

1. When you sleep, a part of your brain called the hippocampus replays what you've learned while you were awake. This helps you encode those things you've learned into your long-term memory. The better strategy would be to read the material during the daytime, and then sleep on it, because then you will actually encode that material into your long-term memory.
2. Let's say you're staying up really late working on a problem set that you just can't crack. The smart thing would be to go to bed now and try again in the morning. During REM sleep, your brain integrates new memories with other memories you've previously learned. This can often result in insight: recognizing patterns and solving problems without even consciously thinking about it. If you pull an all-nighter, you miss out on that subconscious insight.
3. When you stay up all day and all night, though, your signaling gets completely out of whack -- you're seeing light when you shouldn't be, and you're eating at weird and unexpected times. That throws your cells' circadian clock out of sync, which makes you feel awful: a vague sense of nausea, fatigue, lassitude, sleepiness, etc.
4. Every night when you sleep, your brain detoxes itself. When you don't sleep, your brain doesn't get to do this, the metabolites build up, and your brain cells don't get repaired.
5. As you stay awake longer and longer, your brain becomes less and less efficient at burning energy. So when you don't sleep, your brain is not being as efficient as it could be. Meaning it just won't work as well.
6. When your brain becomes less efficient burning energy, that can impact your prefrontal cortex. That's the part of the brain responsible for good judgement and making smart decisions. When your prefrontal cortex stops working well, your ability to make smart choices and not be impulsive becomes compromised.
7. This can also impact both parts of your brain responsible for integrating sensory information.
8. After just one night of lost sleep, people have moodiness problems. They become crabby and emotionally unstable.
9. You could suffer from a "sleep attack," where your brain forces you to pass out in spite of your every intention to do.
10. Even if you don't fall asleep behind the wheel, you're still a danger to yourself and others after pulling an all-nighter. If you've been awake for 24 hours, your performance is as impaired as if you were legally drinking and had a 0.1 BAC.

