



Sleep and Academic Performance: A Quiz

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*The information used for the quiz items was adapted from Craig Lambert's article "Deep into Sleep" in *Harvard Magazine*, July-August 2005.

Many students skimp on sleep in an effort to fit more into and get more out of their days (and nights). How does sleep – and the lack of sleep – affect your performance, including your ability to perform academically and to consolidate new learning? The following quiz can help you to think about how sleep affects you as a student and in your life generally. For each question, choose the one best answer. (The correct answers appear at the bottom of page 2.)

1. You and your roommate have spent the evening learning something new (e.g., a new set of vocabulary, a new musical piece, how to use a piece of lab equipment, etc.). Your roommate decides to go to bed and get six hours of sleep, while you decide to continue to practice what you've learned without sleep. Which of the following will likely happen?
 - a. Your roommate's performance on the task will have improved after sleeping for six hours without additional practice.
 - b. Your performance after continuing to practice without sleeping will have improved.
 - c. Your roommate's performance will have improved for vocabulary and fact based information but not for motor related activities.
 - d. Your performance will have improved for motor related activities but not for vocabulary and fact based information.
2. Two groups learn a logic game designed by researchers to test complex cognitive procedural thinking. After learning the game during the afternoon, Group 1 got drunk shortly before going to bed. Group 2 went to bed sober. When the two groups played the game again the following day, what happened?
 - a. Performance was the same for both groups.
 - b. Performance was 40 % worse for Group 1 (who drank before going to bed).
 - c. Performance was 15% worse for Group 2 (who did not drink before going to bed).
 - d. Performance was 15% worse for Group 1 (who drank before going to bed).
3. Which of the following is actually an effect of sleep deprivation?
 - a. Half of your normal number of antibodies are produced in response to a viral challenge (e.g., flu vaccine).
 - b. Your body experiences the pre-diabetic condition of insulin resistance and weight gain.
 - c. Your body experiences increases in cortisol (a hormone associated with stress), heart rate, and blood pressure.
 - d. You have an increase in cravings for carbohydrates and junk-food.
 - e. You experience depressive symptoms.
 - f. All of the above.
 - g. None of the above.

4. If you are faced with the choice of sleeping or pulling an all-nighter in preparing for an exam the next day, it is better to:

- a. pull an all-nighter only if you need to cram in a lot of facts.
- b. pull an all-nighter for an exam where you are expected to problem-solve and/or synthesize information.
- c. sleep, as a general rule, although pulling an all-nighter could possibly work for an exam based only on cramming in a lot of facts.
- d. sleep, regardless of the type of exam, to improve your ability to function and perform at your best.
- e. choose to cram rather than sleep, regardless of what kind of exam.

5. It is widely known that a blood alcohol level of .08 - 0.1 percent impairs performance (e.g., results in lack of coordination and balance). But not many people are aware that a lack of sleep can have similarly negative effects on performance. How many hours of staying awake is equivalent to a blood alcohol level of 0.1 percent?

- a. 24 hours
- b. 30 hours
- c. 50 hours
- d. 72 hours
- e. Not comparable

6. If we compare the following two people, X and Y, who do you think gets more out of the day? X sleeps eight hours and is awake for sixteen hours. Y sleeps four hours and is awake for twenty hours.

- a. Y is getting more out of the day.
- b. X is getting more out of the day.
- c. Since Y is 20% less efficient with only four hours of sleep, Y will only get 16 hours of work done which is equivalent to the amount of work X is able to get done while also getting eight hours of sleep. They get the same amount out of the day.
- d. X gets more out of the day because with more sleep X is better able to learn and think clearly, to enjoy social interactions, and to be healthy mentally and physically.
- e. X, for the reasons stated in both c and d.

So how did you do on the quiz?

Answers: (1) a (2) b (3) f (4) c (5) a (6) e

You might be interested to explore your responses and discuss the relationship between sleep and learning with a BSC academi counselor. To schedule an appointment, call 617-495-2581, or stop by the Bureau at 5 Linden Street in Cambridge, MA.

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