

The science of sleep for optimal performance and well being



Unit 6: Keeping it Quiet: Constructing Your Sleep Environment

Anyone up for a night cap?

1. After the party: the effects of alcohol on sleep...

It turns out that late drink probably does more damage than good to sleep quality. While alcohol might help you crash, it is also likely to cause fitful sleeping in the middle of the night and can decrease deeply restorative slow wave sleep (see Introduction, section on slow-wave sleep). Many people report waking up super-early after a night of drinking, which can wreak havoc on your circadian clock, not to mention your memory, mood and behavior. For optimal sleep, cut back on the alcohol before bed time.

This is my third latte...

2. Caffeine can keep fuel that daytime hurry... and the nighttime worry

It can take between 9 and 21 hours for your liver to metabolize most of the caffeine in your system. You may still be feeling that morning espresso at the end of *The Hills*. If you drink caffeinated beverages, we recommend that you avoid them after lunch time, to give your liver a fighting chance at eliminating enough of the drug to allow your brain to sleep at bedtime. Note: For ladies on birth control, the effects of caffeine may stick around even longer. This is because birth control pills can reduce the speed at which your liver is able to eliminate some drugs, including caffeine.

Midnight flag-football in the Quad!...

3. Aerobic exercise and sleep...

We love exercise, in fact some studies suggest that working out may even help improve your sleep. Just not working out right before bedtime. Before you sleep, your body needs to decrease your internal temperature. If you are exercising right before bedtime, you may be interfering with this process. Your body temperature drops slightly a few hours after exercise; so the best time to exercise is probably about 3 to 6 hours before bedtime. This allows plenty of time to chill, both literally and figuratively.

Dude, try this new sushi roll...

4. Indigestion...not helpful for good sleep...

Ever stayed up with some serious indigestion? Even without considering how terrible running to a bathroom down the hall and exposing your roommate to some unpleasant odors can be, it can also completely interrupt your sleep.

Eating too close to bedtime can increase the risk of indigestion. However, skipping dinner can also be a problem, since feeling too hungry may increase alertness.

Making your sleep environment conducive to sleep

You need to make your mind associate your bed with sleeping. Just like that Pavlov guy taught his dogs that bell ringing = eating, you need to teach yourself that bed = sleeping. Check out the suggestions below:

1. The Bed-Desk-Kitchen-Lounge

Beds are for sleeping. Beds in college are also for studying, eating, stretching, reading, chatting, jumping and pretty much everything else. They take up 75% of your half of the room; why wouldn't you spend most of your time on them? We get that you love your Ikea zebra bedroom set, but spending a lot of time reclining can actually hurt your sleep. When people are having trouble sleeping, it can be because being in bed just doesn't signal sleep to them anymore. Insomniacs who spend time reading or writing in bed start to associate their sleeping place with their books, and have trouble getting to relax when they actually need to sleep. If you find yourself having trouble sleeping, try limiting laptop use to your desk or outside your room. Keep the iPods out of the sheets and watch TV from your chair rather than your pillow. Study in the lounge or hang out on your friend's couch. Beds are comfy, but who wants their attempts to sleep to be interrupted by flashes of your chemistry book? You've trained the brain to associate beds with sleep your whole life; don't spend four years teaching it bad habits. If you're having trouble sleeping, get rid of the distractions and reserve your bed for dreaming and not much else.

2. Do you close your eyes and see the red numbers of your clock burning into your brain, chastising you for still being awake? Well that's scary, but one way to prevent it is to turn your clock around. Pret-ty simple. Seeing the clock when you wake up briefly in the middle of the night can lead to worry about what time it is, which can keep you up.

3. If you have trouble sleeping well, don't go to bed at night until you're tired. This suggestion only works well if: 1) you're getting out of bed in the morning at a consistent time, and 2) you are giving yourself a chance to unwind before bedtime. In other words, if you are playing tennis until midnight, it's not necessary to keep playing until 1:00 AM because you don't feel sleep coming on yet. On the other hand, if you are reading quietly as your bedtime approaches and you're not feeling tired yet, it's OK to keep reading and go to bed a little later...as long as you'll be up at the normal time the next morning.

4. If noise in your dorm environment interferes with your sleep, try using a "white noise maker". Who wouldn't like to sleep in the Brazillian rainforest or on a Maui beach? Actual "white noise makers" can be purchased at some drug stores and are easily found on Amazon.com. Alternatively, a fan can serve the same purpose—producing white noise that can help you sleep through roommates snoring or neighbors talking.

Read below for more ideas on how to deal with noise and improve sleep in your college environment:

Sleep and college are often at odds with each other, whether you're pulling an allnighter to study for your chem exam, partying until the break of dawn to celebrate a full moon or having one of those intense philosophical conversations with the dreadlocked guy across the hall. Still, without sleep, you're not going to get very far, so it's important to identify both what's keeping you from sleeping and how to sneak in the shut-eye when no one is watching. Below we've identified some common problems college students have when they actually want to sleep, however rare it may be.

The Raucous Roommate

You like to party as much as the next girl, but a techno dance party at 5:00 AM? Sure, your roommate is from Paris or Pittsburgh or wherever they have parents with no curfew and neighbors with no ears, but seriously, Gorillaz music has a time and place and it isn't sunup in your dorm room. It's pretty difficult to confront other people, especially those that have access to everything you own, but if you're going to make it work, it's time to have a sit-down chat. Make it as pleasant as possible without sounding accusatory or sarcastic. "So Jenny, funniest thing this morning, I had this crazy dream where you were PLAYING MUSIC IN THE MIDDLE OF THE NIGHT." Gets the point across, but at what cost? Instead take the blame yourself, but be firm. Explain that you have "different" sleeping patterns, that require at least seven-eight hours of uninterrupted sleep, with music and talking counting as interruptions. Offer to draw up a schedule of sleep time and wake time, with generous allowances for "music" time during normal hours. If that doesn't work, broach the subject with your RA, not to tattle on your roommate, but to see if there's anywhere in the building like a lounge, kitchen or laundry room that dance parties could go on unnoticed. You really don't want tension between you and someone who lives three feet away, but, tension or not, no sleep equals witch monster, and there will be considerable tension when you throw her stereo out the window. You deserve sleep. Fight for it.

The Early Riser

You're so lucky you went to a school prestigious enough to have a Division 1 swim team! Your roommate not only has rippling muscles that earned him the Best Looking title of the dorm, but he also gets to wake up at 4:30AM every weekday and every other Saturday! His wake up routine includes him pressing the snooze button four times, so that the buzzer drills into your brain over a span of forty minutes. By the time he actually leaves, you're more awake than ever and dreaming of ways to sabotage his bid for the Olympic trials. Yet the idea of standing up to his 6'6" frame makes you consider whether you couldn't be more productive if you just got used to waking at the crack of dawn. Instead of leaving yourself open to getting crushed by the deltoids of steel, try some other strategies that might help you get your beauty sleep. He needs to set an alarm, but how loud does it need to be? Light sleepers might be able to get up to a vibrating noise, or a soft tune, rather than the buzzer that sounds like a high school fire alarm. Ask your roommate to experiment with other settings on his clock, or to consider setting a cell phone on vibrate somewhere on his bed if that can effectively wake him. Nix the snooze button completely. There's no excuse to let someone repeatedly wake you up every ten minutes- that's torture. If he can't be courteous enough to stay awake after one alert, he needs to move into Olympic Village sooner rather than later. Discuss prepping for the day the night before, rather than listening to him rustle through piles of dirty clothes looking for his Speedo. And explain to him, since he was obviously raised in a cave, that door slamming really isn't cool for sleeping, whether he's late or not. We're proud that he's a fish in the pool but we'll cheer for him between the hours of 10:00 AM and 10:00 PM thankyouverymuch.

Practice suggestions:

1. If one or more of the suggestions above differs from your nighttime habits, consider adopting one of these healthy sleep habits.

- 2. Continue to follow the sleep scheduling you've been working on.
- 3. Continue to use the 30 second sleep diary.

Thirty Second Sleep Diary	y:	
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	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Time you went to bed last night:							
Time you got out of bed this morning:							
Number of minutes you estimate it took you to fall asleep last night:							
Number of times you remember waking up in the middle of the night:							
Total number of minutes you estimate you were awake in during the night:							
Total amount of sleep you had last night:							
Number (none = 0) alcoholic beverages you consumed before going to bed last night:							
Did you take any sleeping medication last night (record "yes" or "no")? If yes specify.							
How much did you enjoy sleeping last night? 0 1 2 3 Not at all Very much							
How refreshed do you feel this morning? 0 1 2 3 Not at all Very much							

Adapted from Morin, C.M., and Espie, C.A., Insomnia: A Clinical Guide to Assessment and Treatment, Springer 2004.