

- Mark your confusion.
- Purposefully annotate the article (1-2 mature, thoughtful responses per page to what the author is saying)
- Write a 250+ word response to the article.

Teachers, Students, and Sleep by Dave Stuart Jr. for DaveStuartJr.com, 09/26/15

Lately, I've been writing about motivation because, it being the start of the school year, I am dying to know how to help my students (nearly all of whom start the year wanting to do well) persist in motivating themselves to do the year's work and achieve a year's worth (or more) of growing into people who will flourish long-term. Motivation is their job, and it's my job to teach them how to do their job better.

Let's take a different tack on motivation today, one that's almost universally ignored. **If my students sleep better, I bet they'll self-motivate better.** And: so will you. And so will I.

I've been thinking about sleep ever since reading Maria Konnikova's fascinating, three-part series for *The New Yorker* on sleep. And then my wife, Crystal, read the series, which got us both thinking about it, and talking about it, and experimenting with it.

The fruits of all this inquiry? Ten things, below. In addition to Konnikova's articles, I'll also cite Shawn Stevenson's *Sleep Smarter: 21 Proven Tips to Sleep Your Way to a Better Body, Better Help, and Bigger Success*. (The subtitle is a little self-helpy for my liking, but it's a cool book.)

Facts about sleep that should matter to us and our students

1. Good sleep is a fragile creature. It can be thrown off by all kinds of close-to-bedtime substance consumption, including some you might expect — caffeine, nicotine — and some you may be surprised by — like food in general. I used to think a snack before bed wasn't a bad idea; well, from the sleep perspective, it may be a little deleterious. A newly filled belly might help you fall asleep quicker, but your sleep isn't as deep as it could be otherwise. Which leads me to...

2. Quantity doesn't equal quality. Substance-aided sleep may be easier to get, but it's not as useful.

From Shawn Stevenson's *Sleep Smarter*:

“One of the most valuable and overlooked aspects of sleep is an operation called memory processing. This is where short-term memories and experiences get converted into long-term memories. [Note from Dave: kind of an important operation for learning.] Memory processing is predominantly affected by different stages of REM sleep.... The bad news [about some substances before bed] is that REM sleep [can be] significantly disrupted. You won't be able to fall into deeper levels of sleep, and your brain and body won't be able to fully rejuvenate.

3. Regularity is sleep's friend. The key to higher quality, REM-filled sleep is *regularity*. Regular exercise helps us sleep better, as does a regular meal time, as does a regular bed time. In fact, one study suggests that sleep variability (i.e., going to bed at inconsistent times) is one of the most important factors in how well people sleep. It's better, then, to go to bed at the same time each night rather than going to bed early tonight to “catch up” from a late one last night.

4. Regular sleep schedules even predict better GPA and mood. We know that mood is an important part of student success, and GPA is still one of the best ways predict post-secondary success. This is why health teachers can't be the only people speaking to students about sleep; it impacts the entire school day.

5. Saying, “Well, I know someone who doesn’t get much sleep, and they are super successful” is just like saying, “Well Mr. Stuart, my uncle didn’t graduate high school and he makes \$1 million a year” — it doesn’t disprove the studies. If you know a student (or an adult) who doesn’t get good sleep but still performs really well, it stands to reason that they could be performing much better with more consistent sleep.

From Shawn Stevenson’s *Sleep Smarter*:

“A physician study published in *The Lancet* proved that sleep-deprived individuals took 14 percent longer to complete a task, and made 20 percent more errors than individuals who were well-rested.”

The point is that, just because Sleep-Deprived John does better than his peers with inadequate amounts of sleep doesn’t mean he couldn’t be 14 percent faster and 20 percent more accurate otherwise. (Not to mention happier; see #4).

6. You actually figure stuff out while you sleep. Here’s a bizarre study from Konnikova’s second article in the series:

“In one experiment, the University of Tübingen neurobiologist Jan Born and Ullrich Wagner, a neuroscientist at the University of Münster, taught a group of people a relatively complex math task. Though the subjects didn’t know it, there was a simpler way of solving the problem—an abstract rule that would enable a quick solution. Few of the subjects spontaneously figured out the solution the first time. Each participant was retested on the task eight hours later; some were allowed to sleep and others had to remain awake. Just under a quarter of the group that took a sleepless break came up with the faster solution. But the insight rate more than doubled among the subjects who had spent the eight hours sleeping: sixty per cent of them could now see the shortcut. As we sleep, our brains replay, process, learn, and extract meaning. In a sense, they think.”

7. Melatonin — sleep’s hormone — ought not be scoffed at. This is the substance released by your body when your circadian rhythm says it’s time for bed. It makes you feel sleepy — but it does way more than that.

From Shawn Stevenson’s *Sleep Smarter*:

“Melatonin has been proven to:

- Improve immune system function. [A reason, perhaps, that a lot of students and teachers in our school are sick right now — we’ve been skimping on sleep during the back-to-school craziness.]
- Normalize blood pressure.
- Reduce proliferation of cancer cells and tumor growth (including leukemia).
- Enhance DNA protection and free radical scavenging.
- Decrease risk of osteoporosis.
- Decrease risks of plaques in the brain (like those seen with Alzheimer’s disease.)
- Alleviate migraines and other pain.
- Improve thyroid function.
- Improve insulin sensitivity and weight reduction.”

This is the kind of thing that blows me away. Such a powerful hormone, and so easily (as we’ll see in #8) disrupted.

How to get better sleep

I've already hit on a few ways (consistency in exercise, eating times, and sleep schedules; avoiding certain substances right before bed), but here are a few more.

8. You can't handle the light! Remember melatonin? Exposure to light — especially the blue kind emitted during the daytime and from every electronics screen in the universe — interrupts the body's release of melatonin. Your eyeballs have certain photoreceptors that detect changes in light (these receptors even work in blind people); heck, even your skin has light-sensing abilities.

A crazy study from Konnikova's first article:

“Czeisler has found that artificial light can shift our internal clocks by four or even six time zones, depending on when we're exposed to it. In one study, out earlier this year in the journal PNAS, Czeisler and his colleagues asked people to read either a printed book or a light-emitting e-book about four hours before bed, for five evenings in a row. The effects were profound. Those who'd read an e-book released less melatonin and were less sleepy than those who'd read a regular book; their melatonin release was delayed by more than an hour and a half, and their circadian clocks were time-shifted. It took them longer to fall asleep. The next morning, they were less alert. These resetting effects can result not just from prolonged reading but from a single exposure. In his sleep lab, Lockley has seen it happen after exposing subjects to short-wavelength light for less than twelve minutes.”

9. So chill on the screens. This is probably the easiest thing my students (and I) can work on: screen time needs to end at least an hour before bed (although the Czeisler study above suggest that even earlier would be better). When I set the alarm on my phone before climbing into bed, I now kind of awkwardly try to not look at it. This is probably the beginning of some kind of photophobic complex.

10. And do get some daylight. Unless, that is, you live in the lightless wasteland known as Michigan-during-January-through-March.

Check out this study, from Stevenson's *Sleep Smarter*:

“When compared to office workers who have direct access to windows at work, those office workers who didn't have access to windows got 173 percent less exposure to natural white light and as a result slept an average of 46 minutes less each night. This sleep deficit resulted in more reported physical ailments, lower vitality, and poorer sleep quality.”

Take a walk, people. In the daytime. And if you are silly enough to think you're this movie-worthy teacher for only seeing the daylight through your classroom window each day (read: me, my first year of teaching), stop. (Also: Stevenson says that sunlight during the hours of 6 to 8:30am is of maximum benefit — in case you were wondering.)

Conclusion

Sleep makes us more likely to succeed and more likely to enjoy each day. When something does both of those things — improves our outcomes in the future and our quality of life today — we're silly to ignore it.

If you're a successful person who neglects sleep, it's worth considering a self-experiment for a few weeks to see how you might be more successful with consistent sleep. I've written before about the performance-enhancing power of constraining our working hours; sleep is another reason that being strict with our working hours can make us better teachers (and our students better students) in the long run.

Possible response options:

- How is your sleep life? Reflect on how your life lines up with the advice given in this article.
- Choose any passage and respond to it.