Sleep is a big issue for IMSA students and their parents. As you can imagine, various people have different ideas about how much sleep a student should get vs. how much sleep they truly need. Let us give you a typical day in the life of an IMSA student:

“George gets up at 6:45 AM for his 7:30 photography class. He skips a shower (does that at night) and heads for the academic building to grab a tasty muffin and some juice from the ‘Breakfast-to-go’ bar. He eats in class because his teacher is OK with that (some may not be). So far, all this is normal and relaxed for George. He has another class before lunch and some free time to do homework or socialize (he usually socializes or hunts down a teacher he needs to talk with). Then there is lunch, which is good, and George is able to ask a friend about a difficult problem on his Geometry problem set. The rest of the afternoon is spent in classes. George’s day ends at 4:15. He is in a sport, so he heads off to practice from 4:30 to 6:30. The time varies depending on whether or not there is a game that night. If there is a game, he may not be back on campus until 9:00 PM. No game? Then it’s off to dinner. George eats dinner and heads to the hall for “7 check.” From there he goes to his room and does about two hours of homework, usually the lighter stuff that can be gotten out of the way easily. From 9:00 to 10:30 he socializes in the commons or plays some games on the computer with friends. Around 11:00,
George tackles some of the more difficult projects, like researching and writing a paper for History or English. He does this while texting, IM’ing or facebooking (that’s called multi-tasking). He may continue working like this until he is tired, until the internet connection shuts off at 1:00 AM, or until he realizes the clock reads 1:30 AM. If the paper is due the next day and he did not start it soon enough, George may stay up until 3:30 AM or later until the project is finished. Then it’s off to bed to start the next day.”

Not every student at IMSA lives their life like this, but most live it like this at one time or another unless they are reasonably disciplined in the area of time management. Ideally, students should be able to participate in everything they want to, and end their day at a reasonable hour. Unfortunately, this is not reality. Students cannot do everything they want to do in a given day. They have to pick and choose, prioritize, sacrifice, and manage a variety of options. In addition, many parents feel the student can do without some of the socializing and most, if not all, of the video gaming, IM-ing, texting, and facebooking. Unfortunately, this is also not reality. The reality for teenagers is very different in our society today. Much of this generations’ social networking is occurring on the internet rather than face-to-face. Teachers are also using the internet to track assignments, collect projects, and offer resources the student can use outside of class. This is especially true in the case of IMSA students. Because IMSA is a “community based learning environment”, there are requirements outside of normal homework that need to be met (like wing activities or leadership seminars); not to mention the fact that there is simply a considerable amount of homework to do. While staff, teachers, parents and resident counselors guide and direct students into making healthy choices with their time, it falls largely upon the student to carry this through. Many students learn through experiences that sleep, or lack thereof, can cause some significant consequences in their daily lives.

According to surveys by the National Sleep Foundation, 60% of high school students report extreme daytime sleepiness, while about 25% report falling asleep in class at least once a week. Half of all adolescents get less than 7 hours of sleep on weeknights and that drops to 6.5 hours by the time they are seniors in high school.
Other facts relevant to adolescent sleep patterns:

- Tired students have difficulty remembering what they just learned because neurons lose their plasticity, becoming incapable of forming the synaptic connections necessary to encode a memory.

- Sleep loss debilitates the body’s ability to extract glucose from the bloodstream. Glucose is converted into glycogen, the only substance the brain can use to nourish itself. Without this stream of basic energy, the prefrontal cortex is affected more than other parts of the brain; drastically reducing executive functions such as the orchestration of thoughts to fulfill a goal, the prediction of outcomes, and accurately perceiving consequences of actions. Tired people have difficulty with controlling their impulses, while more abstract goals, like studying, take a back seat to more entertaining diversions which take less energy to process.

- A tired brain “perseverates”: It gets stuck on a wrong answer and can’t come up with a more creative solution, repeatedly returning to the same answer it already knows is erroneous.

- The more you learned during the day, the more you need to sleep that night for memory encoding to take place.
To consolidate memories, certain genes appear to “up-regulate” during sleep; they literally turn on, or get activated. One of these genes is essential for synaptic plasticity (where the neurons become flexible enough to make and strengthen connections with each other). The brain does synthesize some memories during the day, but they are enhanced and concretized during the night: new inferences and associations are drawn, leading to insights the next day. Thus the old maxim “Why don’t you sleep on it.”

The *emotional* context of a memory affects where it gets processed. Negative stimuli get processed by the amygdala, while positive or neutral memories get processed by the hippocampus. Sleep deprivation hits the hippocampus harder than the amygdala. The result is that sleep-deprived people fail to recall pleasant memories yet recall gloomy memories just fine. It is no wonder then that sleep disturbances are a symptom of depression.

Sleep loss increases the hormone ghrelin, which signals hunger and decreases its metabolic opposite, leptin, which suppresses appetite; meaning sleep loss can cause weight gain due to unnecessary eating. Sleep loss also elevates the stress hormone cortisol. Cortisol is “lipogenic” meaning it stimulates your body to make fat. Human growth hormone is also disrupted. Normally secreted as a big pulse at the beginning of sleep, growth hormone is essential for the breakdown of fat. On average, children who sleep less are fatter than children who sleep more. This isn’t just in the U.S; scholars around the world...
are considering it as they watch sleep data fall and obesity rates rise in their own countries.

- Sleep is a biological imperative for every species on Earth. But humans alone try to resist its pull. Instead, we see sleep not as a physical need but a statement of character. It’s considered a sign of weakness to admit fatigue, and it’s a sign of strength to refuse to succumb to slumber. Sometimes it becomes a “right of passage” at IMSA to see how much less sleep a student can get!

**Tips on how to sleep well**

Probably most IMSA kids and college students will report that these tips seem unrealistic and unobtainable. In some or many instances this will be true. That is why commitment to personal time management is essential for academic productivity. Many college students struggle with this their entire time in college. The sooner you figure out and adhere to a personal schedule that works, the sooner your brain will function at an optimal level. The following things are done by people who know how to sleep well.


- Sleep only when sleepy
- If you can’t fall asleep within 20 minutes, get up and do something boring until you feel sleepy.
- Limit nap taking: taking less than an hour-long nap before 3:00PM is ideal. Otherwise, naps should not be longer than 20-30 minutes.
- Get up and go to bed at the same time every day, even on weekends
- Refrain from exercise at least 4 hours before bedtime
- Create the best possible sleep environment: keep the room cool, quiet and dark; use comfortable mattress and pillow; use the bed only for sleep (not homework or reading); turn off electronics (computers and TV generate light that stimulates the brain into staying awake)
- Develop sleep rituals. Give your body cues that it is time to slow down and sleep: Listen to relaxing music, drink tea (non-caffeine) do relaxation exercises, have a quiet time or “chill” (whatever that might be for you!)
- Stay away from caffeine (Pretty obvious, but the most often ignored)
- Have a light snack before bed
- Use sunlight to help set your biological clock: As soon as you get up in the morning, go outside and turn your face to the sun for 15 minutes
(given that the IMSA academic building has relatively few windows, this may be the last time you see natural light for some time).

Everything on Earth needs sleep…
So do you.