

8 Hours a Night?



In Your Dreams!

After years of an entrenched belief that sleep is one of those things you can build up a tolerance to and only the weak-willed or bored succumb to a by-the-book eight hours, adamant scientists are overturning my conviction. Too-little sleep is associated with all sorts of nasty things — from car accidents to memory loss to immune deficiency, weight gain, stunted growth, depression, and even, premature death

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You know you're sleep deprived when the milk smells like coffee and so does the laundry because you've accidentally thrown your cuppa into the load in lieu of detergent. You know you're sleep deprived when your son tells you he was awakened by suspicious noises at 2 a.m. and he found you downstairs engaged in a new form of zombie-like behavior — sleep-sweeping. You know you're sleep deprived when it's 4 a.m. and your To-Do List is only a quarter of the way done and you tell yourself: *Sleep is overrated anyway. I'll just bake one more batch of meringues and then for sure I'll hit the pillow.*

For those of you who savor sleep and clock the recommended eight hours, you may want to mosey on wakefully to the next article. Exhortations and explorations about the benefits of ad-

equating shut-eye might very well bore you, er, to sleep. For all the rest of you, however, prop up your eyelids just long enough to blearily scan the next few pages. There may actually be hope for us weary lot. Then again, I might be daydreaming...

Sound the Alarm

Sleep seems to be a fact of life for most living organisms and it's a predominant theme on many levels. The concept of sleep is introduced in the first *parshah* in the Torah, when Hashem cast Adam HaRishon into a deep slumber, a "*tardeima*," to create Chavah from his side. Sleep is associated with a variety of practices and events in Jewish tradition. We wash our hands six times after sleeping to remove the impurity that comes from experiencing a state which, on some level, resembles death. Prophecy

was conferred on all prophets save for Moshe Rabbeinu while they were asleep. It was while asleep that Shimshon unwittingly forfeited his supernatural strength when his wife cut off his hair. And, of course, we still have ringing in our ears King Achashveirosh's sleepless night and the chain of miraculous events his insomnia triggered.

But for all the centrality of sleep in our daily lives, you could just about have blown me down with a feather pillow when I made the following startling discovery while perusing the medical literature: sleep is not a luxury; it's a necessity. Yup, if I hadn't seen it with my own two weary eyes I never wouldda thunk. After years of an entrenched belief that sleep is one of those things you can build up a tolerance to, and only the weak-willed or bored succumb to a by-the-book eight hours, adamant scientists are overturning my conviction. Too-little sleep is associated with all sorts of nasty things — from car accidents to memory loss to immune deficiency, weight gain, stunted growth, depression, and even, er, premature death. As far as rats go, sleep deprivation can be a real killer. After being forcefully deprived of sleep, rats die within two to three weeks — similar to what happens when they're starved.

But while scientists give the nod to the need for sleep, they're not exactly sure why it's important. Sleep is regulated by several hormones and chemicals, including adenosine, whose levels rise in the brain in an effort to tire us out enough that we'll

finally catch some z's. Interestingly, that cuppa we crave in the morning for its miraculous wake-up properties actually tampers with our brains. Caffeine inhibits adenosine, preventing it from binding to the brain, thereby reducing its hypnotic hold on us and allowing us to feel wakey-wakey even when we're far from it.

Some research indicates that the brain produces more adenosine when it's feeling "burned out," kind of like when your ancient refrigerator occasionally generates those pathetic clanging noises in a desperate attempt to make you pull the plug and give it a rest. When we sleep, we "power-down" our bodies, conserving energy through relaxation and reduced demand for the bodily functions that sap the body's resources throughout the day — even the most talented overeaters among us have not yet succeeded in figuring out how to eat while asleep, and ardent exercise-a-holics can dream all they want, but sleep-jogging ain't happening any time soon!

Keep Out — Brain at Work!

What's interesting is that while sleep does largely entail a shutdown of many organs and systems in our bodies, there are actually certain organs that function in high gear while the body is asleep. Studies show that our bodies repair themselves during sleep — wounds and surgical incisions have been shown to heal faster and better in those who get adequate sleep, and immune function improves with enough sleep. Researchers at the University of Toronto Center for Sleep and Chronobiology studied the effects of sleep deprivation on the immune system. Dr. Harvey Moldofsky examined natural killer cells, a naturally occurring immune system component that attacks bacteria, viruses, and tumors. In the study, twenty-three men got about eight hours of uninterrupted sleep for four consecutive nights. On the fifth night, researchers awakened the men at 3 a.m. and

Sleep Tips: Put Your Best Sleep Forward

- Make sure your pillow is the right one for *you* — not too soft or too firm. The wrong pillow can interfere with your sleep by contorting your neck or causing pain.
- Make your bedroom as dark as possible. Even the light emitted from an LED alarm clock has been found to hamper deep sleep!
- Avoid napping late in the afternoon — it'll keep you up later on.
- Spend a few minutes in the early morning sunlight to help your biological clock realign itself with nature's cycles. Bright sunlight stimulates the feel-good hormone, serotonin, reducing levels of melatonin, the sleep hormone.
- Reduce stimulants like coffee, chocolate, and caffeinated soft drinks throughout the day as their sleep-tampering effects may inhibit your restfulness at night.
- Take a few minutes to relax before bed — read a book, take a warm bath, listen to soft music, or meditate. Try to soothe any anxiety or worries so they don't interfere with your ability to fall asleep.

kept them up for the rest of the night, effectively reducing their sleep quota by four hours. This single interruption in sleep pattern was found to have decreased the activity of their natural killer cells by more than one-fourth the next day. Ouch!

Various hormones produced during sleep protect and boost us in immeasurably valuable ways. Melatonin, often called the sleep hormone, is one of these beneficial hormones that brews while we snooze. Among its many properties, melatonin inhibits tumors from forming, prevents viral infections from taking their unpleasant grip on our bodies, increases antibodies in our saliva, exhibits antioxidant properties, and even enhances the quality of sleep. Human growth hormone (HGH) is another hormone secreted in large doses during deep sleep, leading some researchers to make the somewhat inconclusive claim that inadequate sleep may be a possible factor in stunted growth. How's that for an incentive to get your kids to bed on time?!

We also know that our brains need sleep or they become foggy, cloggy, and inefficient. A widely publicized 2003 study performed at the University of Pennsylvania School of Medicine demonstrated that cognitive performance in humans declines with fewer than eight hours of sleep. And the National Sleep Foundation (you get kicked off the Board if you're an insomniac!) maintains that "seven to nine hours of sleep for adult humans is optimal and that sufficient sleep benefits alertness, memory and problem solving, and overall health, as well as reducing the risk of accidents." Lack of sleep significantly affects the working memory, responsible for processing information, decision making, reasoning, and remembering autobiographical information from your life experiences.

In a clinical study, eighteen women and twenty-two men were permitted to sleep only twenty-six minutes per night over a four-day period. Cognitive tests administered before the sleep deprivation and then twice a day during the four sleep-strapped days showed that the subjects' cognitive abilities fell significantly. On the final test, the average working memory span of the group had dropped by 38 percent compared to the control group whose sleep had not been restricted.

And just when you thought sleeping with that textbook under your pillow in wishful preparation for tomorrow's test was a *bubbeh maiseh*, whaddaya know? It is! But getting a good night's sleep (i.e., *without* the textbook under the pillow!) might actually do the trick, as sleep's restorative abilities may make you mentally alert the next day. However, researchers at University of California conclude that Mama's plea to sleep rather than study won't boost memory abilities, only give you better access to the information you've already learned.

The emerging picture is that if you don't snooze, you lose. So how come most of us don't get enough? How much *is* enough? And, more importantly, how do we get it?

Counting Sleep

Eight is a hallowed, exalted number in Jewish thought, transcending above the physical seven to reach the lofty heights of *l'malah min hateva*, the higher, metaphysical realms. Whew, very esoteric. About as esoteric as getting the eight hours of sleep we all need every night for most of us. I did the math (See? Cognitive function pretty good considering I'm running a 1.5 million hour sleep debt at last count! Thank goodness for calculators!): to get eight hours, the average person needs to hit the sack at 11 p.m. That's daylight, in some parts of the world! Has the figure eight been plucked out of some scientist's hat like a white sheep or is it really just what the doctor ordered?

Professor Jim Horne, director of Loughborough University's Sleep Research Center, sounds the alarm on the eight-hour sleep demand. "It's nonsense. It's like saying everybody should have size-eight shoes or be five-foot-eight inches," he says. "There is a normal distribution — the average sleep length is seven, seven-and-a-quarter hours. Lots of people report having more or less than the average."

The National Sleep Foundation (NSF) doesn't offer any insight into the whys and whats of eight, preferring, instead, to suggest a broader "seven to nine hours" as optimum for adults ages sixteen and older, although children need at least ten hours of sleep per night and newborn infants need a whopping sixteen to sixteen and a half hours of sleep a day! And for those

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who think that older people need less sleep, the NSF quickly disputes this myth. Research shows that even the elderly meet the need for seven-to-nine hours but they may wake more frequently due to health problems or poor sleep hygiene, plus they may take naps throughout the day, which contributes to their overall sleep quota.

Despite strident calls for averaging eight, health, lifestyle, and culture significantly impact the amount of sleep necessary for maintaining good emotional, physical, and mental health. Some people yawn if they haven't slept a "bagel"; others are perfectly chipper on five or less. In days gone by, before electricity transformed night into day, people slept in accordance with the celestial bodies, going into bed shortly after dark and awakening with

the first light of dawn. Today, with our modern, frenetic life, anything above five hours max seems like a tall order. Dr. Michael Breus, PhD, a clinical psychologist, board certified in Clinical Sleep Disorders, and author of *Beauty Sleep* believes that the invention of overtime is one of the prime culprits in stealing our sleep. But while sleep experts are willing to compromise on the "seven to nine" rule, the NSF has one hefty caveat: "Getting enough sleep refers to the amount of sleep you need to not feel sleepy the next day." Professor Horne concurs.

From Bleary to Bright-Eyed

Dr. Michael Breus has a practical, no-nonsense approach to incorporating sleep into a healthy lifestyle that is truly refreshing. He, too, is quick to debunk the eight-hour claim, asserting that every person has their own "magic sleep number" that will assure them a restful night and an alert day. Interestingly enough, he says that getting too much more sleep than what you really need will make you feel more tired. He asks patients to experiment in finding their personal sleep number by starting with the basics.

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"I start by teaching them what time to go to bed," he tells Family First. "Most adults haven't been taught when you go to bed since they were kids and they haven't had much opportunity since then to think about it. Either they crash when they're exhausted or they finally go to sleep when everything's done." Sound familiar?

In determining a bedtime, Breus suggests pinpointing an estimated wake-up time. "Wake-up time is usually socially determined. You get up for your kids, for work, for davening. You can't do anything about a preset wake-up time. But you can control when you go to sleep!" His formula is to take this wake-up time and count backward five ninety-minute segments to come up with your dream sleep quota. "Ninety minutes represents the average time it takes an individual to get through a sleep cycle and most people average five cycles a night," he explains.

While presto, change-o is always exciting, one or two nights of roughly the seven and a half hours your body needs won't necessarily yield any great shakes. But keep it up for a longer period of time and the results will have you grinning. Dr. Breus points out that it takes ten to fourteen days to get your body regulated in a proper sleep regimen. The measure of a truly satisfying sleep formula is when you wake up a couple of minutes *before* your alarm. You'll eventually find your natural sleep rhythm by sticking to a sleep schedule over several days.

But for those of us set in our sleep-deprived ways, it's got to take much more than a caught worm to get the night owl to turn feather to become an early bird. What's the payback? And is it worth it? Dr. Breus gives an emphatic, resounding "Yes!"

"There is clear-cut data to suggest that when you have enough sleep you make better decisions,

you have more creative energy, and your reaction time is better. Plus, you'll increase your overall health and your immune function, you'll perform better, not suffer from as much moodiness, and you'll enjoy better relationships." Could a little extra sleep really be the cure-all it's being portrayed as? The good doctor is adamant. "It sounds like a miracle, and in fact, it is," he promises. He doesn't even flinch when I ask for a money-back guarantee. Maybe that's because he granted the interview free of charge! Either way, the prospect of shunning the shackles of constant exhaustion in favor of a restful, more conscious state of being does sound rather tempting.

See if this little scenario is somewhat familiar: The To-Do List mocks you with wide-ruled little eyes, tauntingly pointing at the last 153 items that have not yet been ticked off. Especially when deep in the throes of Pesach cleaning and cooking, many of us fall prey to the belief that if only our lists were vanquished we'd finally be able to *earn* some sleep. But our fresh look at the facts casts doubt on the stay-up-all-night reflex. It's rather difficult to be productive the next day when you find yourself cleaning out the already Pesach-ized cupboards and using the broom handle to stir your multiple cups of coffee. And then there's that money-back guarantee, of course...

Change Is Now!

But if you're still not impressed by all the glowing health, cognitive, and productivity benefits described above, here's a real wake-up call about how "Me sleep?" may become "Fat chance!" Sleep deprivation has been shown, beyond the shadow of a doubt, to be linked to weight gain; subjects who turned over a new leaf and got the sleep they needed actually lost weight. Dr. Breus explains the physiology of this phenomenon very simply. "When you deprive your body of sleep, four things occur: your metabolism slows down; cortisol levels rise, which means you have increased appetite; your choice of foods changes from eating healthy foods to preferring high-carbohydrate foods; and you have two hormones doing two things — leptin, which tells you to stop eating, becomes decreased, while ghrelin, which tells you to eat, becomes increased. Clearly, sleep deprivation is a recipe for weight gain!"

In a field trial, a group of seven women committed to getting seven and a half hours of sleep a night over a two-month period. Five out of seven of the group lost between three and



fifteen pounds, all without making a single change in life-style or eating habits, save for their commitment to sleep.

The good news is adequate sleep is attainable for those of us who want to pursue its golden, life-changing properties. While Western lifestyles largely advocate a sleep pattern in one hefty chunk, many other cultures break up sleep into shorter segments. In Israel and Latin American countries, an afternoon siesta contributes to overall sleep quota and mothers with young babies can make up for late nights by sleeping during the day. The caveat to keep in mind is to avoid napping after 3 p.m., as it can sour your sleep later on. Above all, stick to your decision to make adequate sleep a priority. Setting an alarm to remind you to stick to your bedtime — preferably a half hour before your target bedtime to allow for some relaxation and hygiene routines — is an effective strategy that Dr. Breus highly recommends to patients to begin doing.



and worry or anxiety. Caffeine is a major culprit in sleep disorders; even a cup of coffee earlier in the day can work its dark magic later on when you least want it to. Dr. Breus offers a valuable tip to weary sleep-chasers looking to enhance their nightly slumber: exercise. “We don’t know why, but exercise improves the quality of sleep,” he says.

While a commonly held myth is that “normal” sleepers fall asleep as soon as they hit the pillow, those who do so indicate that they are actually very sleep deprived, an unhealthy sign. “It can take ten to twenty-five minutes to fall asleep. Sleep is not an on-off switch; it’s a process,” explains Dr. Breus. That said, if you’re counting “*Chad Gadya*”s for more than twenty-five minutes, get up and do something to relax you instead of lying in bed morosely ticking off the hours till wake-up.

As we clean our homes and hearts of the last vestiges of *chometz*, we crumb-busting, dirt-dusting, determined lot ought to be able to do a little rearranging of the mentality and beliefs inside our noggins where sleep is concerned, too. Perhaps it’s high time we shelved those smirking To-Do Lists in favor of a relaxing, adequate bedtime while the night was yet young and the stars were still in the sky. At least then, when we make it to the finish line we’ll be able to stay awake through the entire Seder instead of reciting the Haggadah in our sleep. And how apropos to make Pesach the start of a new sleep regimen! For as we happily, if wearily, crunch our way through pounds of flat, unleavened matzoh while marveling at the wonders of a clean, sparkling house, we’re reminded of how much it pays to invest whatever it takes to ... Rise and Shine! ■

Sleep, Sleep Everywhere, and Not a Drop for Me!

The following conversation has been known to occur between me and my irritable, sleep-deprived self, whom I’ll call Groggy:

Me: Don’t worry, stop kvetching, Grogge’le. I know it’s 2 a.m. and we’re just getting started but you’ll see — I’ll make it up to you!

Groggy: Make it up to me? Yawn ... How in the world are you gonna do that? Last night it was one, tonight it’ll be at least three, and tomorrow you said it’s an all-nighter for us because you have that Sleep article to finish. I can’t keep my eyes open any more!

Me: Listen — put in these toothpicks; that’ll help. And quit complaining — you’re tiring me out. Now, about my making it up to you, here’s the plan. It’s pure genius! On Shabbos morning, I’ll sleep in till at least noon while the kids trash the house! There now, don’t you feel better already?!

Groggy: Zzzzzzzzz ...

Well, turns out Groggy’s not the only one skeptical about the possibility of making up hundreds of hours of lost sleep in one fell swoop. Sleep debt can’t be paid off so quickly once it accumulates in vast quantities. While a little falling behind in your sleep payments might be forgivable if you make it up on the weekend, a large outstanding balance just collects interest; and if you think sleep creditors are too tired to care, you’re right! Looks like I’m going to have to come up with a new plan to satisfy ol’ Grog after all. Could earlier bedtime, perhaps, be an option?! It’s looking awfully inviting.

If we’ve bored you to sleep with all this talk of wanton sleep deprivation when what you’re suffering from is the darker side of the pillow — insomnia — don’t fear, there’s hope for you, too. Insomnia is a highly treatable malady with cures ranging from relaxation techniques to cognitive-behavioral therapy, medication tweaking and a change of lifestyle or habits. Insomnia or poor sleep are most often caused by pain; interferences like the wrong pillow, too much light, or a snoring roommate; medication that affects sleep;

Sleep Facts:

- A new baby typically results in 400–750 hours of lost sleep for parents in the first year of life.
- Elephants sleep standing up during non-REM sleep, but they lie down for REM sleep.
- Some studies show that fatigue is involved in an estimated one in six fatal road accidents.
- Some studies suggest that women need up to an hour of extra sleep at night compared to men; not getting adequate sleep may be one reason women are much more susceptible to depression than men.
- The extra hour of sleep received when clocks are put back at the start of daylight saving time in Canada has been found to coincide with a fall in the number of road accidents that occur.
- According to sleep experts, teens need at least 8.5–9.25 hours of sleep each night.
- Sleep medications can be valuable and helpful for those with sleep disorders but they usually don’t produce a “natural” sleep and many people can become psychologically dependent upon a pill for falling asleep. Alternatives to sleeping pills include cognitive-behavioral therapy and nonmedicinal treatment by a qualified sleep specialist.