



## Sleep Well, Lead Well

How Better Sleep Can Improve Leadership,  
Boost Productivity, and Spark Innovation

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“We continue to live by a remarkably durable myth: Sleeping one hour less will give us one more hour of productivity. In reality, the research suggests that even small amounts of sleep deprivation take a significant toll on our health, our mood, our cognitive capacity and our productivity.”

—Tony Schwartz

# Lack of Sleep: A Leadership Liability

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Many executives and senior leaders are getting by on little sleep and see no way around it. In a 24/7 and hyper-connected culture, we try to squeeze out more and more from ourselves and from others. We push for productivity, an edge, the next new thing. When it seems there are not enough hours in the day, something has to give—and often, it's sleep.

- But sleep is not a luxury.
- Lost sleep reduces brain power and productivity.
- Lost sleep diminishes concentration and impairs memory.
- Lost sleep reduces the ability to communicate and lowers creativity.
- Lost sleep triggers moodiness and increases stress and anxiety.
- Lost sleep impairs motor skills—and people skills.
- Lack of sleep is related to a variety of serious health problems such as obesity, diabetes, and cardiovascular disease—increasing healthcare costs.
- Lack of sleep hinders leadership performance and, as a result, can put your organization at risk.

**Consider a 2010 IBM CEO Study of 1,541 senior executives. They reported a reality that is amplified today:**

- Complexity is on the rise—and 50 percent of executives doubt their ability to cope.
- Creativity is the most important leadership quality.
- The most successful organizations will co-create products and services with customers.
- Better performers will manage complexity on behalf of their organizations, customers, and partners.



The future requires the ability to deal with complexity, to be creative, and to have the interpersonal skills to navigate interdependent networks and relationships. But without adequate sleep, leaders' clarity, perspective, and judgment will suffer. They will struggle to make sense of and lead through complex times.

But what if leaders were well rested? They would be functioning at their best, with better memories and stronger skills for making new and creative connections. They could regulate emotions and more effectively engage with others. Stress would decrease. The complexity of leading would be matched by the capability to respond with clarity, creativity, and productivity.

Senior executives—indeed, everyone working in challenging, complex, and uncertain times—should stop working at cross-purposes with the brain and get more sleep.

This paper provides an overview about why sleep matters and what you can do to prevent sleep deprivation from hijacking the brain of leaders throughout your organization.

*Lack of sleep causes problems for all employees—leaving your organization vulnerable to safety and productivity gaps. A study published in 2010 concluded that fatigue-related productivity losses were estimated to cost \$1,967 per employee annually. Source: Journal of Occupational and Environmental Medicine. 2010 Jan; 52(1): 91-8.*

To view infographic, click the link below:  
<http://yourlocalsecurity.com/in-good-measure/sleep-or-die>

# Sleep On It: What Neuroscience Tells Us about Sleep and Effective Leadership

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Neuroscientists have studied the effects of sleep—and lack of sleep—on the brain, cognition, and performance. Their conclusions for already overworked executives? The quantity and quality of sleep influences memory, decision making, attitudes, innovation, and creativity throughout the whole day.

## What's going on? What happens during a good night's sleep?

At a very simple level, two important things take place:

- 1. The sleeping brain processes and organizes information.**
- 2. The sleeping brain helps the body's stress response switch off.**

Both functions are critical for effective leadership—and just five or six hours of sleep limits the ability of the brain to do them well, according to Dr. Jessica Payne, a cognitive neuroscientist who runs the Sleep, Stress and Memory Lab at the University of Notre Dame. She was also the Center for Creative Leadership 2012 Smith Richardson Fellow and has worked with us to understand the links between sleep, stress, and leadership performance.

Sleep-deprived leaders don't get the full opportunity to process and organize information and, as a result, don't perform at their peak level. **Here's why:**

- When we sleep, our brain cycles through various stages. The brain is very active during sleep.
- About every 90 minutes, we enter Rapid Eye Movement (REM) sleep. During this time the brain processes the previous day's events. Experiences are solidified into permanent memory and sequences of learned skills become "muscle memory."
- Without sufficient REM sleep, all the "intake" from the day doesn't get processed. If it isn't processed, we won't remember information or access it when it would be useful. We limit our ability to have new, unlikely insights and make useful or important connections.

In contrast, ample REM sleep improves our ability to make inferences and connections. We are more likely to have insights and solve problems.

*REM sleep is also important in other ways. Without adequate sleep, people are more likely to only remember negative images and experiences—leaving us working with a skewed perspective when we are evaluating a situation or solving a problem. We also are more likely to have negative moods and negative emotions, which narrows thinking processes. As a result, we are not as open or receptive to ideas and less likely to have creative insight.*

In addition to giving the brain time to process the day, sleep allows the body and brain to turn off its stress response. While moderate stress helps us feel motivated and have the intensity to do all the things we need to do, high levels of stress—especially if prolonged—can potentially damage the brain, affecting memory, emotion, and decision-making over the long term.

# The Power of REM Sleep: Why Quality Sleep Matters

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When you get just 4-6 hours of sleep, you won't benefit from REM's essential functioning. REM sleep comes only after our brains cycle through several stages of non-REM sleep, with each REM sleep period becoming progressively longer.

**To understand how sleep improves leadership effectiveness, let's take a look at what happens during a good night's sleep. Sleep broken down occurs in two types: non-REM and REM sleep. Non-REM sleep occurs in four stages:**

**Stage 1** is the beginning of sleep when one can be easily awakened. When we close our eyes, our brain waves (theta waves) become slower and more regular. Similarly to meditation, our breathing slows and our large muscles begin to relax. This stage lasts about 5-10 minutes. If awakened during this stage, you might not know you were actually asleep.

In **Stage 2**, we sometimes have a fleeting sensation of falling. We disengage from our environment and are blissfully unaware of outside stimuli. The body temperature starts to decrease and the heart rate slows down. This stage lasts about 10-25 minutes but makes up half of our night's slumber.

**Stage 3** is characterized by slow theta waves in the brain interspersed by slower delta waves. This stage lasts about 30 minutes but represents about 20 percent of our total night's sleep. When theta waves disappear, we enter Stage 4.

**Stage 4** is the deepest stage of non-REM sleep. Also known as the brain delta wave state, it lasts for 30-40 minutes. If aroused during Stage 4 sleep, you'll feel groggy and disoriented. During this stage, blood pressure drops, respiration slows, blood flow to muscles decreases, and secretion of growth hormone by the pituitary gland peaks stimulating body development and tissue repair. Sound important? Stage 4 is critical when we are sick.

REM sleep comes after 30-40 minutes of Stage 4 deep sleep. Eighty-five percent of our dreams occur during REM because of the increased activity of the brain; most important, the previous day's events are solidified into permanent memory trace and sequences of learned skills become muscle memory. In REM sleep, messages from the motor cortex get blocked at the brain stem, muscles relax, and you are temporarily unable to move limb muscles.

It is important to know, however, that sleep does not occur in a sequence as we have outlined it here. We retrace stages through Stages 3 and 2, after Stage 4, then go back into REM sleep. We enter REM sleep about every 90 minutes throughout the night. On average, we cycle through these stages approximately four to five times a night.



The stressed brain isn't creative or inclined to make creative connections. Under threat (a disagreement with a colleague, a tough dilemma, being pulled in multiple directions, economic or market pressures) the brain focuses on survival responses and is open to a limited range of possibilities.

Lack of sleep is a big stressor by itself. When we don't get the sleep we need, we experience surges in stress hormones (cortisol and adrenaline), which can also disrupt our cognition and ability to regulate our emotions.

If not careful, we can get into a vicious cycle where the more poorly we sleep, the more stressed we are—and the more stressed we are, the more poorly we sleep.

**Bottom line:** *Managers, executives, and many others are working long and hard, dealing with complex issues and facing unknown challenges. Sleep deprivation limits the ability to respond to complex organizational challenges.*

# Take Action: The Role of Learning, Development and HR Functions

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## Who has time for sleep?

That's the big push-back we get from time-pressed, overextended leaders—and it's probably a thought that goes through your mind, too.

### **The flip side is this: Who has time to be tired?**

To bring your best thinking and energy to any activity or any problem, you need your brain on your side. If an extra 30 minutes of sleep each night leads to better focus, clear decision-making, innovative connection, and better regulation of your emotions—you'll easily gain back 30 minutes worth of productivity.

The benefits of sleep extend beyond the individual, too. Imagine how better sleep by many managers, team leaders, and employees could amplify productivity and engagement across the organization.

Here's what you can do as a leader of an organizational learning, leadership development, or HR function.

Push back on the 24/7 culture: Acknowledge the reality that people are overextended, at work and in other areas of life. You can't change this on your own or overnight, but you can play a role.

Introduce the idea that more work isn't better work. Any number of work practices and demands play into this assumption—working across time zones, accessibility via technology, heavy travel schedules, fears about being pushed out of a job, internal competition, to name a few. Look for ways to question practices and assumptions that value hours working over impact and results.

Get the word out about the benefits of sleep. Challenge the cultural notion that sleep is a waste of time or a weakness. Enlist a senior executive in your efforts. Share the science—people like to know that there is evidence behind a recommendation. Let people know that when they are tired, they are less effective as leaders and managers.

Encourage them to view sleep as a simple, easy, cheap way to boost productivity and be more effective for themselves—and to do what they can to give their teams information and support to be rested. Employees who take brief naps should not fear dismissal by the organization.

Consider creating a “sleep awareness” program or campaign—on its own or as a component of an employee wellness program or a leadership development initiative.

Factor sleep into policies and schedules. Alongside the culture and awareness messages, take a look at organizational policies and norms that discourage rest and recovery time. Consider time off after travel; review schedules, break times, limits to hours or shifts. Work with teams or departments to set norms for cross-time zone availability and technology/accessibility expectations.

Transition reviews and appraisals to reward the what (performance, results, ideas) and the how (managing self, interpersonal skills, collaboration)—not the hours put in or constant accessibility.

## Tips to Promote Sleep in Your Organization

**Share articles, tips, quizzes, and helpful links** via existing employee communications.

In routine meetings or trainings, **discuss the sleep dilemmas** that teams face and possible solutions.

**Meet with managers** whose people are especially prone to long hours and travel.

Help them **understand the value of sleep** for themselves. Encourage them to tout sleep as a way to be more effective.

**Sponsor a “take back our sleep” week** to educate and support time to sleep more, power down, and find solutions for lack of sleep. Alternatively, have departments pick a week each month to power down and get more sleep—some of the habits may stick.

**Test the “sleep more” theory for yourself.** Get enough sleep each night. Take naps.

Are you more clearheaded and effective? **Spread the word.**

# Valuing Sleep: A Message to Your Organization

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Some people may be interested in the way the brain and nervous system work to ensure we function at our best. For them, there are plenty of resources; we list some at the end of the paper.

For everyone else, just knowing that science has shown strong links between sleep and optimal performance may be enough. The key, then, is to focus on the practical side of getting enough sleep so leaders in your organization begin to experience the benefits.

Here are some facts and tips you can share to help everyone sleep.

## Sleep: True or False?

**Test your knowledge of sleep. Which statements are true?**

1. Sleep is the single most important thing you can do to improve your performance.
2. The brain shuts down during sleep.
3. You can make up for lost sleep during the week on the weekends.
4. Alcohol helps you sleep.
5. Better to stay in bed if you can't sleep.
6. During REM sleep, the brain restores misplaced information.



**1. True.** If you want to improve your performance—get more sleep. Nutrition and exercise are also important to leadership health and well-being; however, if we rank them, getting more sleep can do more to improve your health and your performance.

**2. False.** The sleeping brain is very active. It is busy working away on storing and connecting information, working through problems we need to solve, and processing emotions as we sleep. Certain neurons and areas of the brain are even more active in sleep than when awake.

**3. False.** Sleep debt is cumulative and can accumulate very quickly. Catching up on weekends doesn't counteract lack of sleep during the week. Research shows for each two hours of wakefulness, at least one hour of sleep is needed.

**4. False.** If you've had several drinks at the end of a long day, you probably do feel sleepy. The properties in alcohol can help even the most high-energy person relax and

fall asleep more quickly— but it won't help you sleep through the night. The dehydration caused by the alcohol leads to shallow sleep, often resulting in awakenings and dreams, rather than the deep, restorative sleep that is so important. Drinking alcohol before bed can also cause you to have problems staying alert the next day.

**5. False.** If you can't sleep, get up out of bed. Reserve the bed for sleeping. Do something that is calm, relaxing, and not taxing on the mind. In about 20 minutes, your body will be ready to try to sleep again.

**6. True.** During REM (Rapid Eye Movement) sleep the brain replenishes neurotransmitters that organize neural networks essential for remembering, learning, performance, and problem-solving. While we sleep, our brain selects what to remember and what to forget. When you get just four to six hours of sleep, you won't benefit from REM's essential functioning.

## How Much Sleep Is Enough?

Most adults need seven to nine hours of sleep a night. Roughly 5 percent need less and 5 percent need more.

## Jump-Start Better Sleep

Jessica Payne of the Sleep, Stress, and Memory Lab at the University of Notre Dame says the ideal way to know how much sleep you need is to take a two-week vacation! Go to bed at the same time every night and sleep until you naturally wake up. By week two, you will be rested and settled into the right amount of sleep for you. When your vacation is over, make a commitment to getting that much sleep every night.

### **Given that a two-week vacation isn't practical for most of us, try one of these strategies to jump-start better sleep:**

- Start going to bed and waking up at the same time every single day. Do it for one month and see how you feel. If you are consistently tired when you wake up or are sluggish during the day, you need more sleep.
- Go to bed 20 minutes earlier than usual, consistently for one month. Just 20 or 30 extra minutes can make a big difference in how you feel and function.

## Smart Sleep Strategies

- **Set a regular schedule.** Go to bed at a set time in the evenings and get up at the same time each morning (even on the weekends). This takes discipline, but once you create the habit, the benefits will be worth it. Of course, travel, special events, and emergencies (large and small) will throw you off. Just get back on track as soon as you can.
- **Train yourself for sleep.** Create a relaxing bedtime ritual. Take a warm bath, meditate, or read to make it easier to fall asleep. Whatever you choose, do it outside of the bed. Limit the bed for sleeping and sex.
- **Create a relaxing atmosphere in the bedroom.** Remove the TV, electronics, and phone. If you use your smart phone as an alarm or truly are “on call,” put the phone where you have to get out of bed to reach it. Don’t keep the phone on your chest, in the bed, or at the bedside where you will be tempted to “just check.” Adjust lighting and temperature to help you wind down and sleep.
- **If you can’t sleep, get out of bed.** Don’t lie in bed awake. Get up and go to another room to read, stretch, relax tense muscles, engage in breathing exercises, or listen to music until you feel tired. Avoid anything that will get you revved up (checking work messages, paying bills, watching television, addictive video games, a can’t-put-down book).
- **Exercise daily.** Try to exercise 20 to 30 minutes a day. Even small bursts of exercise count. For the most benefit—from a sleep perspective—exercise at least three hours before going to bed.
- **Avoid or carefully time caffeine, alcohol, and nicotine consumption.** Don’t drink caffeine after 2 p.m. No alcoholic drinks three hours before bed. Nicotine anytime interferes with deep sleep and withdrawals can wake smokers up early—another reason not to smoke.

## Sleep Proxies

When it isn’t possible to get high-quality sleep, Jessica Payne suggests a few strategies that benefit your brain and boost your effectiveness.

- Take a short nap.
- Get out of the office.
- Take a walk.
- Do a five-minute meditation.

**Each practice changes your neurochemistry in a way that helps you process information.**



# A Future with Well-Rested Leaders

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**The science is clear: Lack of sleep compromises brain processes and skills needed for effective leadership.**

Unfortunately, many work habits and organization cultures are rooted in the myth that more work is better work. Sleep is often what gives in the effort to do more and be more. The 24/7 culture means that people are working both later into the night and earlier in the morning.

Eventually, the pendulum will shift and sleep will be seen as an essential tool for leaders—and for all of us, predicts Jessica Payne. Someday, people will be okay to take a 15-minute nap or protect their sleep time, knowing they will be more productive the rest of the day.

Some companies are ahead of the game. Google conducted a “sleep awareness” program and has added “sleeping pods” at its headquarters to facilitate brief naps at work. These pods are ergonomically designed private spaces to encourage sleeping. Other sleep-friendly companies include CISCO, AOL Huffington Post Media Group, and Manhattan-based private investment fund Kodiak Capital Group, according to a 2011 *CNNMoney* article.

*“We have a long way to go before sleep is valued as much as it should be,” says Payne. “But sleep is easy; it comes naturally; it’s free. Smart companies—and wise leaders—will start to harness it.”*

# Resources

## Books

- Power Sleep. Dr. James B. Maas. <http://www.powersleep.org/>
- Sleep for Success. Dr. James B. Maas & Rebecca S. Robbins. <http://www.powersleep.org/>

## Articles

- “Humans are good at sleeping, if they get the chance.” Karen Weintraub. The Boston Globe, September 17, 2012. <http://www.bostonglobe.com/lifestyle/health-wellness/2012/09/16/gforce-robort-stickgold-sleep-expert-and-sleep-researcher/8dFqEbMIQJ3ya3JoWYAUfL/story.html>
- “Sleep Cherry-picks Memories, Boosts Cleverness.” Charles Choi. National Geographic, December 1, 2010. <http://news.nationalgeographic.com/news/2010/12/101201-sleep-memories-health-brain-science/>
- “The Secrets of Sleep: From birth, we spend a third of our lives asleep. After decades of research, we’re still not sure why.” D. T. Max. National Geographic, May 2010. <http://ngm.nationalgeographic.com/2010/05/sleep/max-text>
- “Why Sleep Is More Important Than Food.” Tony Schwartz. Huffington Post. [http://www.huffingtonpost.com/tony-schwartz/sleep\\_b\\_832353.html](http://www.huffingtonpost.com/tony-schwartz/sleep_b_832353.html)
- “Why companies are cozying up to napping at work.” Cotton Delo. *CNNMoney*, August 18, 2011. <http://management.fortune.cnn.com/2011/08/18/why-companies-are-cozying-up-to-napping-at-work/>

## Sleep Research and Sleep Labs

- National Sleep Foundation. <http://www.sleepfoundation.org/>
- Sleep, Stress and Memory Lab, University of Notre Dame. <http://psychology.nd.edu/faculty/faculty-by-alpha/jessica-payne-ph-d/>
- The Healthy Sleep Program, Harvard Medical School Division of Sleep Medicine <http://healthysleep.med.harvard.edu/portal/>



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