

WHITE PAPER

# Tired at Work

## A Roadblock to Effective Leadership



By: Cathleen Clerkin, Marian Ruderman, and Elena Svetieva





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## Executive Summary

The science is more and more clear: sleep matters to mental, physical, and emotional health. People feel better and function better when they get adequate sleep. Without enough sleep, people have less energy, their self-awareness and interpersonal savvy decrease, and problem-solving and decision-making abilities decline—all consequences that get in the way of quality work and effective leadership.

Although sleep is a personal and individual matter, costs of sleep deprivation are paid by organizations. If leaders are shortchanging sleep, packing more into their days without rest and recovery, they aren't performing at their best. Instead, they may be compromising team effectiveness; making poor decisions; and struggling to innovate, collaborate, and manage complexity.

However, few empirical research studies have examined the sleep habits of leaders in organizations. Do they get enough sleep to perform at their best? If not, why not?

In this paper, we take a look at the sleep patterns reported by leaders and what these patterns tell us about organizational factors affecting sleep. A survey conducted by the Center for Creative Leadership (CCL<sup>®</sup>) revealed:

**Leaders do not sleep enough, but some struggle more than others.**

**Leaders would like to get more sleep, but work often keeps them awake.**

**Leaders do not sleep differently from other people, but they are assumed to sleep less.**

Our findings also suggest that organizations have a role in three areas:

- Educating leaders about best sleep practices
- Countering the “workplace warrior” culture
- Supporting the ability to detach from work

Supporting healthy sleep habits is an overlooked way organizations can nourish, develop, and protect their people and maintain a capable, high-performing pool of talent.



## Sleep and Leadership: What's the Connection?

Experts around the globe are begging people to get more rest. And with good reason. The scientific evidence of the importance of sleep is staggering—and yet, most people don't get the recommended 7–8 hours of sleep each night. According to Harvard Medical School, even sleeping one hour less than what is needed can have a negative impact, and sleeping longer on the weekend doesn't prevent problems caused by lack of sleep during the week. As a result, many people are living and working in a sleep-deprived state. In fact, 23% of employees in the United States report being too sleepy to fully function (Kessler et al., 2011).

During sleep, significant work takes place—vital processes that are associated with a variety of functions which impact physical, cognitive, and emotional health. Not getting enough sleep is associated with the risk of infections, diabetes, hypertension, obesity, heart disease, depression, anxiety, and lower life expectancy (Epstein, 2010).

Sufficient sleep lets people conserve and restore energy, build memories, and take in new information. Sleep improves cognitive functions, such as memory, attention, and the ability to make connections and inferences (Nowack, 2017). Sleep allows people to regulate their emotions and lower stress levels. Notably, **sleep impacts exactly the human capacities that are most important for leadership effectiveness:** creative problem solving, interpersonal savvy, sound decision making, self-awareness, and energy (van Dam & van der Helm, 2016). Well-rested leaders are better equipped to be open to others' views, juggle different mindsets and perspectives, demonstrate learning agility, and accomplish complex work through collaboration.

In contrast, poor sleep leads to:

- Diminished concentration
- Impaired memory
- Reduced ability to communicate
- Lowered creativity
- Increased moodiness, stress, and anxiety
- Difficulty responding to complex organizational challenges.

When people are tired, their energy reserves are low and self-control suffers. They are more likely to succumb to impulsive desires and compromised decisions (Harrison & Horne, 2000).

Organizations need leaders with the skills and capacities to engage others, steer through challenges, and manage change and complexity—which is why they provide leadership education, career experiences, and developmental opportunities to emerging and experienced leaders. But for leaders to be high performers, on top of their game, and functioning at their very best—consistently—they need sleep, too.



## What are the Sleep Habits of Leaders?

Are leaders well-rested or working tired? Are organizations filled with sleep-deprived leaders who are unable to do their best work? What contributes to leaders sleeping well, or not? Are sleep habits of leaders different from other employees?

It turns out, not much is known about leaders and sleep. To remedy this, we conducted an empirical study to better understand the sleep patterns, beliefs, and problems of executives, managers, and professionals. CCL surveyed 384 leaders in 38 countries. Of those respondents, 243 also completed a three-day sleep log. (For more about this study, please see the [About the Research](#) section at the end of this paper).

The survey revealed:

**Leaders do not sleep enough, but some struggle more than others.**

**Leaders would like to get more sleep, but work often keeps them awake.**

**Leaders do not sleep differently from other people, but they are assumed to sleep less.**

Each of these findings has implications for developing and managing leadership talent and the larger organizational culture. Let's take a closer look at the sleep patterns leaders describe, the sleep-related problems they encounter, and what's going on to keep them awake at night.



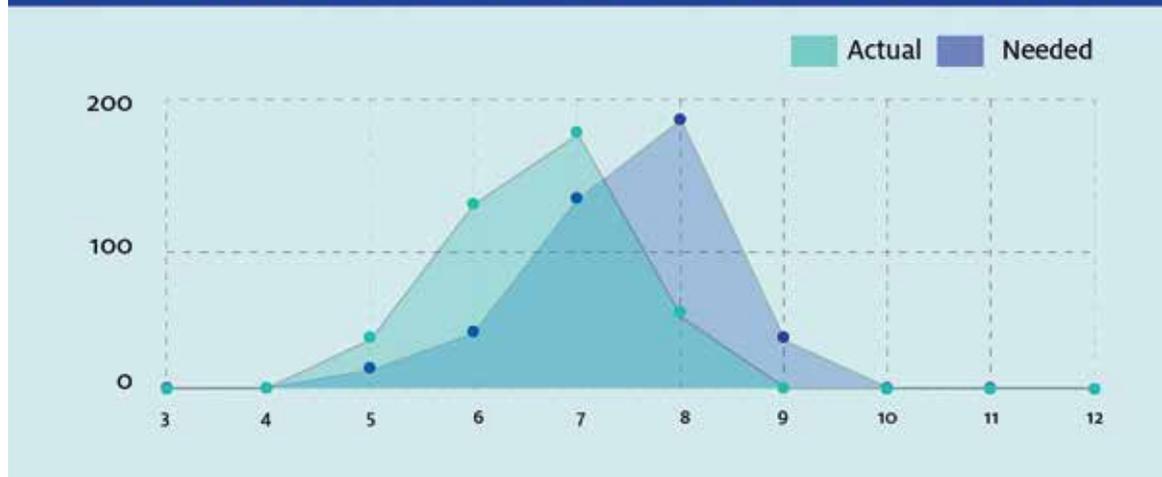
## Leaders Do Not Sleep Enough, But Some Struggle More than Others.

The results of our survey suggest that sleep deprivation is relatively widespread in the leadership population.

Most leaders reported going to bed between 10:30 p.m. and 11:00 p.m., and the most common wake times were clustered between 5:00 p.m. and 6:30 a.m. On average, leaders reported getting 6.63 hours of sleep a night, with 42% getting 6 or fewer hours. The leaders in our survey who submitted an additional a three-day sleep log averaged 7.03 hours of sleep a night, slightly higher than what they had reported from memory. In both data sets, we saw that many leaders are getting less than the 7–8 hours of sleep recommended by experts. When asked how many hours of sleep they needed to feel refreshed and rested, leaders on average said they needed 7.52 hours. More than half (56%) said they needed 8 or more hours.

**Nearly two-thirds of leaders reported a gap between the sleep they need and the sleep they get.** This is known as their “sleep debt” because it is the amount of sleep “owed” in order to perform at one’s best. The average sleep debt was 53 minutes per night.

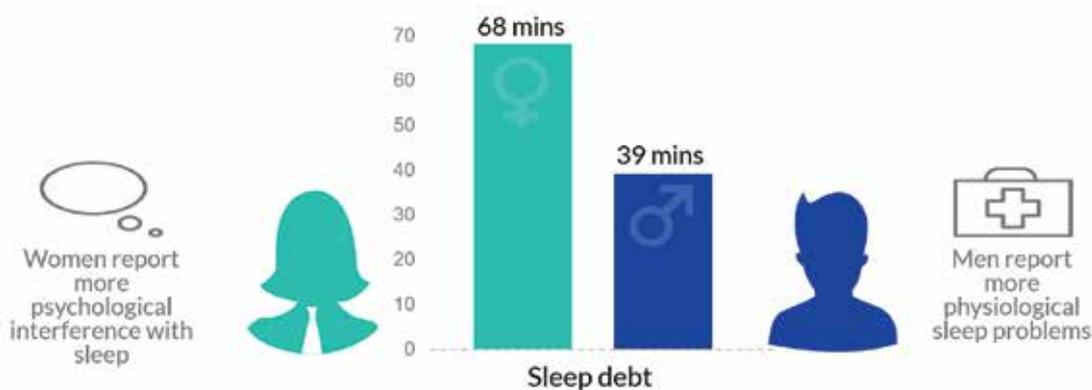
## Actual Hours of Sleep vs Hours Sleep Needed



Not surprisingly, some leaders struggle more than others to sleep well.

Women and men reported getting similar *amounts* of sleep. However, women reported a significantly higher sleep debt (68 minutes) compared to men (39 minutes).<sup>i</sup> This suggests that **women, on average, feel more sleep deprived**. Women also reported more difficulty falling asleep and waking up more during the night;<sup>ii</sup> as well as greater issues with psychological interference in sleep, especially worrying about upcoming events as well as home-related issues. In contrast, men were more likely to complain of physiological sleep problems such as sleep apnea and breathing disorders.

## Gender Differences



Recent research shows that working long hours has a greater negative impact on women's health than on men's when it comes to diabetes, cancer, heart trouble, and arthritis (Dembe & Yao, 2016). The researchers hypothesized this difference is due to women taking on the majority of household and family responsibilities, effectively extending their workday and compounding stress and exhaustion. The same thing may be happening for women in our study, with a "second shift" of psychological stressors negatively affecting sleep.

Other people struggle with sleep debt due to biological differences in their preferred timing of sleep and wakefulness. Evening people (aka “night owls”) reported getting 71 minutes less sleep than they needed, compared to the 41 minutes reported by morning people (aka “larks”). Evening people were also more likely to report feeling “often exhausted,” and that they “would sleep more if it didn’t interfere with work.” Moreover, evening people seem more affected by sleep deprivation, reporting experiencing more negative repercussions on their mood after poor sleep. They also reported more variable bedtimes and wake times, which can often exacerbate the problem. But in spite of many cultural associations between early risers and success, morning preferences did not predict leader level in this study. Across all levels, leaders were split 60% morning types and 40% evening types.

## Average Sleep Debt



“Morning larks” and “night owls” are terms that reflect *chronotypes*, or biological differences in sleep cycle preferences. Larks feel most awake and refreshed in the morning, while the owls are most alert in the evenings. People tend to be fairly aware of their natural style, which studies of genetics suggest is a heritable trait (Kerkhof, 1985). Other research has confirmed that night owls struggle more with getting enough rest (Taillard, Philip, & Bioulac, 1999). This is at least partly because the typical work day is pitted against them. Standard working hours assume that productivity is optimized in the morning and during the day—which prevents night owls from contributing when they are at their best. Night owls are “socially jet-lagged” (a term coined by Roenneberg, 2012) and working while tired. This problem is often made worse when night owls sleep in over the weekend, making waking up Monday morning even more challenging.

## Leaders Would Like to Get More Sleep, But Work Often Keeps Them Awake.

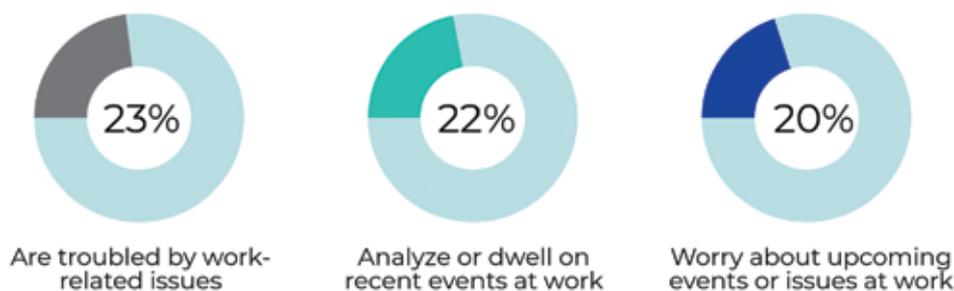
Long days and busy, activity-filled lives are the norm for many leaders and sleep is often sacrificed. One respondent explained:

*“I get less sleep than I would like so that I can exercise daily, spend quality time with my family daily, work, and complete household chores. I would have to reduce time at work, time with family and friends, or exercise in order to add more sleep back into my routine.”*

Our study showed that time is not the only culprit. A substantial portion of leaders reported trying to sleep but having trouble doing so. While most respondents rated the quality of their sleep on a typical night as “fair” (40%) or “good” (41%), nearly a third reported having trouble sleeping at least a few nights a week: 18% struggle to fall asleep, 51% wake during the night, and 24% have difficulty staying asleep.

For some, environmental conditions (noise, temperature) and physical ailments (such as restless leg syndrome or sleep apnea) prevented or interrupted sleep. But the most common reported sleep problem was psychological—being unable to sleep due to thoughts and worries. Moreover, thoughts about work interfered with sleep more than thoughts about home life—23% of respondents reported being troubled by work related issues, while only 13% report being troubled by issues at home.

### Many leaders reported work interfered with their sleep **several nights a week**



In our study, the inability to psychologically detach from work was one of the biggest predictors of sleep problems, even when controlling for things like age, individual differences, and lifestyle factors like exercise or caffeine consumption.<sup>iii</sup> In other words, **leaders are not choosing to shortchange sleep to work more; thoughts of work are interfering with sleep.** This is consistent with other research which shows that the ability to psychologically detach—or stop the mind from ruminating—is a key factor in getting a good night’s sleep (Sonnentag, 2012).

Leaders in our survey described ruminating about the day, thinking through work problems, and the endless to-do lists:

*“My organization and industry in general are very volatile currently with leadership changes and some job losses. While I am not affected (at least now), when I help clients who are. . . I take home their pain because I care. That affects my sleep.”*

*“If I am trying to solve a complex problem, I tend to think about it constantly, including during sleep. If I briefly wake up, I might find it hard to shut that thinking off and get back to sleep.”*

*“I think of things I need to do at work in the night sometimes and get up to write them down, or add to my phone on the reminders list.”*

Expectations around connectedness and responsiveness also interfere with sleep:

*“I feel compelled to jump into work responsibilities within 5 minutes of waking in the morning. In the past, I have been embarrassed to arrive at work (following my 45-minute drive to the office) and be asked about an e-mail I have not yet read since it arrived after I went to sleep.”*

The problem is particularly stark for those who have difficult schedules:

*“I am on call 24/7, work several weekends a month, and I have to be in every weekday at 6:00 a.m. to participate in team meetings, and because the plant leadership comes in later I get to stay until 5:00 p.m. for their meetings. When I am called at night I have to be able to make recommendations on what should be done, especially for new employees. So my mind needs to work as soon as I awake. The effect of all of this is that now when I wake up at night I find it impossible to keep my brain from going into overdrive.”*



## Leaders Do Not Sleep Differently from Other People, But They Are Assumed to Sleep Less.

We asked leaders in our survey to estimate the number of hours that the “typical high-performing executive” and the “average worker” sleep each night. Results showed that respondents think that the typical executive sleeps 42 minutes less than the average employee. They also think that same executive sleeps 27 minutes less than they themselves do.

The reality is different: **executives, managers, professionals, and consultants all reported similar sleep habits and similar hours of sleep, regardless of role or level.**

The perception that top performers (or leaders who continue to be promoted in the organization) sleep less than other employees suggests a belief that going without sleep is tied to achievement, success, and high-performance. Leaders must be “Workplace Warriors.” Behaviors of leaders, as well as organizational and social norms, often encourage long work hours, accessibility, and making work the top priority. Leaders may talk about their relentless days and travel schedules, or send e-mails at all hours. They may brag about not needing much sleep, or, conversely, wear tiredness as a badge of importance: *Of course, I’m exhausted, but who has time for sleep?* Implicit and explicit messages such as these leave anyone who is well-rested feeling guilty or wondering if they need to be working more—which then perpetuates the downward spiral of collective sleep deprivation.

Interestingly, executives were among those least likely to endorse such statements as, “I think of high performers as energetic people that don’t need much sleep” or the assertion that “putting in long hours and sacrificing sleep is a necessary trade-off to get ahead at work.” It seems that high-level leaders are more aware of how important sleep is to leadership—even if they aren’t getting more sleep themselves.



## Changing the Course for Better Sleep

Given the negative consequences of giving up sleep, what can be done to help leaders get the sleep they need to think clearly, interact effectively, and manage the challenges they face? Our research suggests that organizations have a role in three areas:

1. Educating leaders about best sleep practices.
2. Countering the Workplace Warrior culture.
3. Supporting the ability to detach from work.

### Educating Leaders about Best Sleep Practices

Our findings show that many leaders are not getting enough sleep. Although many leaders wish they could get more sleep, they are not following best practices when it comes to sleep. In order to help leaders perform at their best, they should be made aware of how much they should be sleeping, the negative consequences of not getting enough sleep, and steps they can take to foster more and better sleep. Organizations should provide access to information and resources through the leadership development curriculum, as well as through employee wellness initiatives. Organizations would be better off encouraging the whole workforce to place a higher priority on sleep.

On the next pages are some common sleep strategies, along with how often leaders in our study use them, and what experts have to say about whether they are in fact good sleep practices.

Percentage of Leaders in CCL Study	Sleep Practices	What the Experts Say
13%	Use consumer sleep aid products, such as white noise machines and humidifiers.	<p>May be helpful for physical comfort and creating a relaxing environment.</p> <p><b>TIP:</b> Adjust the temperature, lights, and sounds in the room so they are as conducive to sleep as possible. Use earplugs or blackout curtains if necessary.</p>
7%	Take prescription medication.	<p>Use under medical supervision.</p> <p><b>TIP:</b> If you have chronic untreated sleep problems, it might be time to see a sleep specialist.</p>
7%	Use prescribed equipment, such as a C-PAP.	
4%	Take over-the-counter sleep medication or supplements.	
7%	Drink alcohol to fall asleep.	<p>While it is commonly considered a sleep “aid,” drinking alcohol to fall asleep is NOT a best sleep practice. Research shows that while alcohol can induce drowsiness, it also decreases sleep quality and actually increases sleep disturbances and daytime sleepiness (e.g., Roehrs &amp; Roth, 2001). Consistent with previous findings, in our study, alcohol was associated with greater quantity of sleep, but lower quality of sleep and more difficulty staying asleep.<sup>iv</sup></p> <p><b>TIP:</b> Avoid alcohol within three hours of sleep time.</p>
42%	Exercise more than two hours a week.	<p>Regular exercise is a great way to promote good sleep—provided it is done early in the day. If it is done too close to bedtime, it can act as a stimulant and make it harder to fall asleep.</p> <p><b>TIP:</b> Don’t use this as an excuse to give up exercise, just don’t do it within three hours of bedtime.</p>

Percentage of Leaders in CCL Study	Strategies for Sleep	What the Experts Say
<p>86%</p> <hr/> <p>67%</p>	<p>Have a regular wake time</p> <hr/> <p>Have a regular bed time</p>	<p>Setting a regular schedule is a great way to get the most out of sleep. Going to bed and waking up at the same time every day (even on weekends) reinforces a consistent sleep cycle.</p> <p><b>TIP:</b> If you have a sleep debt, try to sleep even 15 or 20 minutes more a day. This small amount of time is unlikely to impact your daily schedule, but it will make a difference in the cognitive resources you bring into each day. Short naps can work wonders.</p>
<p>38%</p>	<p>Have a routine for disconnecting from electronic devices before bed.</p>	<p>Disconnecting from technology (such as mobile phones and tablets) is particularly important. Not “unplugging” has been shown to make it harder to unwind and the blue light from screens can biologically interfere with the melatonin production necessary for sleep (Cajochen et al., 2011).</p> <p>In our study, we found that less use of electronic devices in the evening was associated with better sleep quality and less difficulty in falling asleep, even controlling for demographic and individual difference variables like sleep cycle preferences, age, and exercise.<sup>v</sup></p> <p><b>TIP:</b> Park your devices before going to bed—try to shut down at least one hour before bedtime.</p>
<p>38%</p>	<p>Have a relaxing ritual before bed.</p>	<p>Creating consistent routines is a key aspect of being able to fall asleep quickly and easily. A relaxing ritual such as taking a warm bath or applying lotion signals your brain that it is time for sleep. Lavender has been shown to facilitate relaxation and sleepiness. Warming up your body temperature does the same.</p> <p>If you are struggling to let go of work, mindfulness practices, a gratitude journal, and other stress-reduction techniques can be helpful to relax your mind before bed (Hülshager, Feinholdt, &amp; Nübold, 2015).</p> <p><b>TIP:</b> A relaxing ritual can be especially helpful for leaders who travel and have to fall asleep in foreign environments.</p>



When leaders pay attention to their sleep patterns and habits—when they sleep, how they sleep, and what prevents sleep—they can see how one or more changes might make a noticeable difference in how they feel and function during the day. The benefits of healthy sleep routines were apparent to those in our survey who made changes:

*“I used to get 5 hours of sleep a night and had a bedtime that fluctuated. Once I got onto a schedule where I went to bed at the same time every night (even weekends) and got 6 hours of sleep a day during the week, and didn’t oversleep past 8 hours on the weekend, my cognitive abilities improved and I wasn’t exhausted all the time. Such a great discovery!”*

*“I am very careful about sleep. I wake once a night to go to the bathroom (due to age). I go to bed about 10:30 p.m. each night and wake by 5:30 to 6:00 a.m. every morning, even on the weekends. I have an evening routine and a morning routine. I meditate every morning and journal many mornings.”*

*“I have had much improved sleep by focusing on some mindfulness meditation each evening before going to sleep, as well as trying to build a habit to write down things I’m grateful for. It’s made a big difference in my sleep.”*

## Countering the Workplace Warrior Culture

Educating leaders about best sleep practices on an individual level is an important first step, but to infuse healthy sleep beliefs into organizational culture, organizations must stop idealizing the Workplace Warrior. As long as getting by on little sleep is rewarded and admired in organizations, information about how individuals can sleep better is unlikely to be heeded.

To create a cultural shift, healthy sleep habits must become rewarded and admired. Leadership development efforts can address this directly and help people embrace the notion of sleep as productive, rather than wasteful or lazy. The link between well-rested employees and desired performance can be made in numerous ways. Here are some ideas:

- **Enlist one or more executive sponsors.** Senior leaders can give legitimacy and visibility to the message of sleep: telling their stories as “reformed” workplace warriors during a leadership program, speaking about the value of talented *and* well-rested employees, giving recognition to high performers who counter the warrior culture. Senior leaders are also in positions to make policy or process decisions that relate to sleep and performance. For example, an operations director may review how the company manages staffing across shifts, or a division leader could institute a “recovery day” as a norm for leaders traveling globally. Further, sleep can be tied to indicators of performance such as attention to detail, creativity, and perspective-taking.
- **Encourage leaders to be role models.** Leaders at all levels can influence the culture and behaviors within their teams by being an example of a rested, effective leader, rather than by reinforcing stereotypes about the 24/7 work life. Leaders can be transparent about their own choices to get enough sleep: declining a late dinner after a day of travel so they can be well-rested for an important morning presentation; putting the spotlight on outcomes and impact, rather than hours worked and overloaded schedules; noticing improvements to their productivity and ability to manage the day-to-day pressures due to better sleep—and letting others know.
- **Teach leaders to protect their talent.** Leaders can also help people on their teams who seem to be sleep-deprived or may be candidates for burnout. Managers should pay attention to when people are working. Is an employee always first to respond to e-mail? Sending messages late at night or early in the morning? Always at their desk? If so, the manager needs to intervene: *How can we shift the workload? Go home; this will be here in the morning. You seem to be burning the candle at both ends—what can the team and I do? We value you and need you at your best.*
- **Allow and encourage sleep at work!** Short naps can help people return to a task or challenge feeling refreshed and focused, rather than pushing through and being inefficient. Provide nap rooms, energy pods, or comfortable chairs. Educate employees about how to benefit from such resources and encourage them; if you don’t, you’ll find these resources unused. Again, leaders should set the tone: *I was up too late last night. Let me grab a 20-minute nap so I can be more clear-headed for our 2:00 meeting.*

## Supporting the Ability to Detach from Work

Organizations should establish norms that allow people to maximize performance and support healthy sleeping habits. Many people feel like they are always working, regardless of the place or time of day—or, in fact, whether they are actually working. They may be at home or in bed, but mentally, they are still at work. When thoughts of work cannot be “switched off,” people do not get the rest and recovery they need physically, as well as psychologically and emotionally.

Organizations can support psychological detachment and encourage leaders to set boundaries in a number of ways. Here are some ideas:

- **Accommodate schedules so people can engage and focus when they are at their best and then detach and recover.** Biological differences in circadian rhythms, as well as demanding schedules, can result in a large number of people working during their “off-peak” alertness times. To maximize productivity, organizations can offer flexibility regarding when and where people work, allowing people to design their own work day as much as possible and practical. They should also provide extra support for employees who work at night or long shifts. Leaders can support individual preferences and needs within their teams, too. For example, they can vary the timing of meetings and other collective tasks—the early morning meeting may be ideal for some, but others may contribute their best ideas later in the day. They can also be direct about their own sleep needs and patterns: *I come in early because I’m a morning lark and do my best thinking then—that doesn’t mean I expect you to.*
- **Set a policy limiting after-hours e-mails or creating e-mail-free days.** Late-night e-mails are often the reason why leaders go to bed stressed over work and cannot mentally and emotionally let go. Organizations have the ability to change norms around when and how e-mail, calls, texts, and instant messaging are used and how responsive people are expected to be. Leaders who work across time zones and shifts, or during peak times, may not have as much leeway, but making a distinction between true urgency versus habitual, always-on responsiveness can go a long way to restore work-sleep balance.
- **Encourage leaders to set boundaries and protect their downtime.** Engaging in non-work activities, responsibilities, and relationships can prevent people from ruminating about work well into the night. People should feel supported to “have a life” rather than to be always available. This includes freedom to be involved in activities during the week (exercise, family commitments, leisure) as well as the ability to be truly disconnected from work and unavailable during vacations. Overall, this will enhance rather than hinder individual productivity and may encourage leaders to develop their teams so they can collaborate and cover for each other.



## Conclusion

Sleep is a key ingredient in helping leaders make sound decisions, think creatively and strategically, and be interpersonally effective. Being tired and cranky hurts individual performance and limits organizational productivity. Yet, in the busy lives of leaders, sleep often gets sacrificed.

Our survey of leader sleep habits suggests that leaders are not well-rested, that work-related stress keeps leaders up at night, and that individual beliefs and cultural norms are getting in the way of leaders taking steps for healthy sleep. Although leaders seem to recognize that they are not getting enough sleep, it is likely that they do not realize the impact that their sleep deprivation has on their leadership. Further, organizations underestimate the magnitude and implications of sleep problems. Sleep is an underrated and overlooked component of leadership effectiveness and development.

Based on our data, we think leadership development professionals, as well as coaches, mentors, and executives, should look seriously at addressing sleep as a way to nourish and develop the best possible leaders. Leaders need both sleep education and support if we expect them to improve their sleep habits. Our recommendations are aimed at building a workplace culture that does not inadvertently encourage poor sleep choices but, rather, helps individuals switch off, both physically and psychologically, and get the sleep they need.



## About the Research

The data was collected in 2016 using CCL's Leading Insights community—a set of volunteer panelists who are interested in leadership development. They represent a diverse group of industries. They were recruited as part of an ongoing commitment to provide data about leadership development to CCL.

Respondents were invited to complete the survey through an online survey link. Participants were asked to self-report their average sleep health, habits, and routines as well as share their opinions and beliefs about sleep in general. At the end of the survey, participants were also invited to complete a three day sleep log during the following week.

The survey had 384 respondents from 38 countries across the Americas, EMEA, and APAC. They represented 30 industries and multiple organizational sectors (53% corporate; 16% nonprofit; 11% education; 10% government; 10% other). Our sample was equally distributed across gender (52% male/48% female) and represented all age categories: 18–34 (9%); 35–44 (24%); 45–54 (41%); 50+ (27%).

Participants also reported their leader level: 84 (22%) were individual contributors or professional staff with no direct reports; 74 (19%) were managers of individual contributors new managers; 118 (31%) were senior managers (including managers of managers and/or those who lead a function or division); 77 (20%) self-reported as executive-level leaders responsible for leading the organization or enterprise; 23 (6%) were in the Other category, the majority of which were consultants (11) and self-employed business owners (8).

In addition to completing our survey, 243 individuals also maintained a three-day sleep log—each day we sent a brief online form where they indicated their bedtime, wake time, and the quality of sleep that night.

Statistical analyses were conducted and statistically significant results discussed in this paper are reported in the endnotes.

## Endnotes

- <sup>i</sup> Women reported a sleep deficit that was .48hours (29min) greater than men,  $t(374) = 4.54$ ,  $df = 374$ ,  $p < .001$ .
- <sup>ii</sup> Women reported a greater frequency of waking during the night  $t = 2.29(374)$ ,  $p < .05$ , 95CIΔ[.05, .65] as well as difficulty falling asleep  $t(374) = 2.07$ ,  $p < .05$ .
- <sup>iii</sup> In multiple regression of psychological factors impacting sleep variables (and controlling for individual and lifestyle factors), problems with work-life boundaries and psychological detachment from work were associated with lower sleep quality ( $B = -.385$ ,  $p < .001$ ) and more trouble sleeping ( $B = .328$ ,  $p < .001$ )
- <sup>iv</sup> In a multiple regression of individual and lifestyle factors on sleep outcomes, alcohol predicted sleep quantity ( $B = .113$ ,  $p < .05$ ) but not quality ( $B = -.049$ ,  $p > .05$ ) and was marginally associated with trouble staying asleep ( $B = .102$ ,  $p = .06$ ).
- <sup>v</sup> In a multiple regression of individual and lifestyle factors on sleep outcomes, post-9 p.m. device use was associated with more trouble falling asleep ( $B = .156$ ,  $p < .01$ )



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## About the Authors

**Cathleen Clerkin, PhD**, is a senior faculty member at the Center for Creative Leadership (CCL®). Cathleen's research interests include social identity management and diversity, creativity and innovation, and applied social cognitive neuroscience and leadership. Some of Cathleen's recent research includes perceptions of nontraditional leaders, holistic leadership development, leading innovation, and the link between identity and creativity. Cathleen holds a BA in psychology from the University of California, Berkeley, and her MS and PhD degrees in psychology from the University of Michigan, Ann Arbor.

**Marian Ruderman, PhD**, is a senior fellow and director, research horizons at CCL. Her work is focused on leadership development, diversity, and work-life integration. A noted expert on women's leadership, Marian has coauthored more than 50 articles and book chapters on leadership. Her books include *Standing at the Crossroads: Next Steps for High Achieving Women* (coauthored with Patricia Ohlott), *Diversity in Work Teams: Research Paradigms for a Changing Workplace* (coedited with Susan Jackson), and the Third Edition of *The Center for Creative Leadership Handbook of Leadership Development* (coedited with Ellen Van Velsor and Cynthia McCauley). Marian holds a PhD in organizational psychology from the University of Michigan.

**Elena Svetieva, PhD**, is an emotion scientist and researcher at Fors March Group. Her work focuses on how individuals emotionally respond to messages and situations, and the subsequent implications for their behavior. Elena holds a PhD in communications from the State University of New York at Buffalo, and has completed postdoctoral research fellowships at the Catolica-Lisbon School of Business & Economics, and at CCL.

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+1 800 780 1031 +1 336 545 2810 Mail to: [info@ccl.org](mailto:info@ccl.org)



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#### CCL - Americas

[www.ccl.org](http://www.ccl.org)

+1 800 780 1031 (US or Canada)

+1 336 545 2810 (Worldwide)

[info@ccl.org](mailto:info@ccl.org)

#### Greensboro, North Carolina

+1 336 545 2810

#### Colorado Springs, Colorado

+1 719 633 3891

#### San Diego, California

+1 858 638 8000

#### CCL - Europe, Middle East, Africa

[www.ccl.org/emea](http://www.ccl.org/emea)

#### Brussels, Belgium

+32 (0) 2 679 09 10

[ccl.emea@ccl.org](mailto:ccl.emea@ccl.org)

#### Addis Ababa, Ethiopia

+251 118 957086

[LBB.Africa@ccl.org](mailto:LBB.Africa@ccl.org)

#### Johannesburg, South Africa

+27 (11) 783 4963

[southafrica.office@ccl.org](mailto:southafrica.office@ccl.org)

#### Moscow, Russia

+7 495 662 31 39

[ccl.cis@ccl.org](mailto:ccl.cis@ccl.org)

#### CCL - Asia Pacific

[www.ccl.org/apac](http://www.ccl.org/apac)

#### Singapore

+65 6854 6000

[ccl.apac@ccl.org](mailto:ccl.apac@ccl.org)

#### Gurgaon, India

+91 124 676 9200

[cclindia@ccl.org](mailto:cclindia@ccl.org)

#### Shanghai, China

+86 21 6881 6683

[ccl.china@ccl.org](mailto:ccl.china@ccl.org)

**Affiliate Locations:** Seattle, Washington • Seoul, Korea • College Park, Maryland • Ottawa, Ontario, Canada  
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