

# Optimizing Sleep for an Optimal Workforce in the Oil, Gas and Mining Industries

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## **EXECUTIVE SUMMARY**

Sleep is as essential as oxygen or food to live. Moreover, sleep is integral to productivity, safety, health and well-being. In the often-challenging environments of remote worksites in the oil, gas and mining industries, providing workers with first-rate living and sleeping accommodations is essential to optimize job performance, enhance mental acuity and prevent injuries. With the added complexities of long working hours and physical demands, companies that provide their workers with lodging that offers optimal sleep comforts, along with tools to promote quality sleep, have seen both performance and economic benefits.

This white paper will examine why sleep is vital and why an optimal sleep environment, along with the provision of basic sleep training, offers a compelling component to add to an employer's risk-management strategy resulting in optimized workforce morale, safety, health and performance. In addition, it will address the role these factors play in attracting and maintaining the most talented workforce.

## INTRODUCTION

"Not getting enough sleep has associated economic and health care costs, as well as decreases in productivity and increased safety risks." No matter where a person works or what they do, one thing is certain: A good night's sleep is vital. Or, in the case of someone working a night shift, a good day's sleep is critical to working effectively through the night. Statistically, however, most workers are not getting the sleep they need. "About 65 percent of Americans report experiencing a sleep problem, such as difficulty falling asleep, waking during the night and waking feeling unrefreshed at least a few times each week, with nearly half of those saying they experience that sleep problem almost every night." 1

The corporate world is just beginning to wake up to the integral role sleep plays in the performance, health and well-being of employees.<sup>2</sup> <sup>3</sup> Furthermore, not getting enough sleep has associated economic and health care costs, as well as decreases in productivity and increased safety risks.<sup>4</sup> Research supports the case for sleep-related strategic initiatives to maximize recovery from fatigue and provide a "work-sleep balance," including analysis of policies and practices for optimal work/shift schedules. This is especially important for employers of workers in the oil, gas and mining industries for whom sleep directly impacts their safety.<sup>5</sup> <sup>6</sup> With the abundance of sleep articles in print and digital and the release of compelling research, what may look like a trend is truly a call to action.

Further illustrating the epidemic of a sleep recession, a CDC study estimates that 30 percent of the civilian workforce is sleep deprived. Study author Sara E. Luckhaupt told WebMD, "Employers should take steps to make sure their workers are getting enough sleep, such as by tweaking night shift schedules or imposing limits on consecutive shifts. Employers also should have wellness initiatives that encourage workers to go to sleep at the same time every night and create a relaxing bedroom environment."

<sup>&</sup>lt;sup>1</sup> National Sleep Foundation (2008) <u>National Sleep Foundation</u>, <u>Sleep in America Poll</u>, <u>2008: Sleep. Performance and the Workplace</u>

<sup>&</sup>lt;sup>2</sup> Waking Up the Workplace

<sup>&</sup>lt;sup>3</sup> Making a Business Case for Bedtime

<sup>&</sup>lt;sup>4</sup> Rosekind, Mark R. PhD, et al (2010) "The Cost of Poor Sleep: Workplace Productivity Loss and Associated Costs," American College of Occupational and Environmental Medicine, JOEM Volume 52, Number 1, January 2010.

<sup>&</sup>lt;sup>5</sup> Takahashi, Masaya (2012) "Prioritizing Sleep for Healthy Work Schedules," National Institute of Occupational Safety and Health, Journal of Physiological Anthropology. <sup>6</sup> Caruso, Claire C. PhD, R.N. et al (2004) "Overtime and Extended Work Shifts: Recent Findings on Illnesses, Injuries and Health Behaviors," U.S. Department of Health and Human Services, CDC, NIOSH. April 2004.

<sup>&</sup>lt;sup>7</sup> Centers for Disease Control and Prevention (2012) "Short Sleep Duration among Workers - United States, 2010," Weekly, April 27, 2012 / 61(16); 281-285. CDC Study - Short Sleep Duration among Workers. 2010.

<sup>&</sup>lt;sup>8</sup> Jaslow, Ryan (2012) <u>41 Million American Workers Don't Get Enough Sleep, CDC Says.</u> CBS News, April 27, 2012.

"The quality and quantity of sleep directly impact performance components including concentration, information processing, judgment, reaction time and teamwork."

Understanding why sleep matters offers a foundation from which to identify, formulate and implement sleep-wellness strategies that best serve your company, its workforce and the stakeholders impacted by your business. This white paper serves as a paradigm for further action.

# **ISSUES, RISKS and ECONOMICS**

Oil, gas and mining workers are often challenged to find adequate housing in the remote areas in which they work. The demands of the job are strenuous for these workers, with long hours and a requirement of focused, alert attention. Shift work, inherent to the oil, gas and mining industries, adds another dimension to the challenges these workers face. Too often, the "home" they return to after a long day's or night's work lacks the facilities, comforts and amenities essential to their health and well-being. Instead, the facility they return to must be a place for rejuvenation, nourishment, camaraderie and — for more reasons than generally recognized — sleep.

# Why Sleep Matters<sup>10</sup>

There are few employers who would question the need for sleep for their workers. But there are also few who understand just how debilitating the lack of sleep can be not just to the health of their workers but to the health of their business as well. Research offers insights and validation regarding a number of factors influenced by sleep deficiency, many of which are reviewed here.

**Performance** – The quality and quantity of sleep directly impact performance components including concentration, information processing, judgment, reaction time and teamwork.<sup>11</sup> <sup>12</sup> In fact, "The general effect of sleep deprivation on cognitive performance is well-known: Stay awake longer than 18 consecutive hours, and your reaction speed, short-term and long-term memory, ability to focus, decision-making capacity, math processing, cognitive speed and spatial orientation all start to suffer. Cut sleep back to five or six hours a night for several days in a row, and the accumulated sleep deficit magnifies these negative effects. Nevertheless, frenzied corporate cultures still confuse sleeplessness with vitality and high performance."<sup>13</sup>

<sup>&</sup>lt;sup>9</sup> Menezes, Pires ML, Benedito-Silva AA, Tufik S. (2004) "Sleep Parameters among offshore workers: an initial assessment in the Campos Basin," Rio De Janeiro, Brazil, Chronobiol Int., 21(6): 889-97.

<sup>&</sup>lt;sup>10</sup> Why Sleep Matters: Healthy Sleep Website, Harvard Medical School.

Czeisler, Dr. Charles, <u>Factors that Affect Performance</u>, Harvard Medical School.

<sup>&</sup>lt;sup>12</sup> Stickgold, Dr. Robert, Sleep and Judgment, Harvard Medical School.

<sup>&</sup>lt;sup>13</sup> Czeisler, Dr. Charles A. (October 2006) "Sleep Deficit: The Performance Killer," Harvard Business Review.

"The number one cause of workerinitiated accidents is fatigue in its various forms. such as exhaustion. weakness or sleepiness."

**Productivity** – In addition to myriad performance deficits, inadequate sleep can result in reduced productivity. 14 Sleep metrics confirm the productivity costs related to inadequate sleep. 15 Moreover, absenteeism has a cousin, referred to as "presenteeism;" workers are coming to work but operating at subpar levels. 16 A 2011 Harvard study found that insomniacs, one out of four U.S. workers, are so consistently tired on the job that they cost their employers the equivalent of 7.8 days of lost productivity each year, equaling an average of about \$2,280 in salary per person.<sup>17</sup>

Safety and Accidents - While reduction in workplace accidents has been a focus of companies globally for decades, recent research confirms the role of sleep deprivation in workplace accidents. 18 "The number one cause of worker-initiated accidents is fatigue in its various forms, such as exhaustion, weakness or sleepiness." 19 A study of construction workers in oil and gas projects in China, by Dr. Margaret Chan, illuminates this critical risk 20

Dr. Chan's research showed that "previously identified factors like failure to use equipment or failure by individual workers to follow safety procedures are heavily influenced by fatigue. If you eliminate fatigue, you also eliminate other so-called 'causes' of accidents. Previous research shows fatique can cause performance impairment equivalent to or greater than 0.10% of blood alcohol concentration, a level deemed unacceptable for driving a crane or operating dangerous construction equipment or machinery."21

<sup>&</sup>lt;sup>14</sup> MacMillan, Amanda (2011) CNN Health: <u>Insomnia Costs the U.S. \$63 billion annually</u> in lost productivity

<sup>&</sup>lt;sup>15</sup> Kessler, PhD, Ronald C. et al (2012) "Insomnia and the Performance of US Workers," Department of Health Care Policy, Harvard Medical School, Boston, MA, Journal SLEEP, Volume 34. Issue 09.

<sup>&</sup>lt;sup>16</sup> Hemp. Paul (October 2004) "Presenteeism: At Work- But Out of It," Harvard Business Review.

MacMillan, Amanda (2011) CNN Health: Insomnia Costs the U.S. \$63 billion annually in lost productivity

<sup>18 (2001) &</sup>quot;Preventing Accidents at Work," European Agency for Safety and Health at Work," https://osha.europa.eu/en/publications/magazine/4

<sup>&</sup>lt;sup>19</sup> Wanjek, Christopher (2013) "Workforce Housing and Feeding Solutions for Health, Safety, Productivity and Morale," White Paper, Target Logistics.

20 Chan, M. (2009) "Accident Risk Management in Oil and Gas Construction Projects in

Mainland China," University of Sydney.

<sup>&</sup>lt;sup>21</sup> University of Sydney (2010) "Fatique the Major Accident Risk Factor in Construction".

"Sleep deprivation is implicated in all kinds of physical maladies, too, from high blood pressure to obesity." For oil, gas and mining companies and workers, there can be significant costs (equipment, health-related, environmental, etc.) associated with accidents caused by impaired reaction time, judgment or concentration resulting from sleep deficit.<sup>22</sup>

**Drowsy Driving and Machine Operation** – Driving and operation of machinery is integral to operations in the oil, gas and mining industries. "Moreover, insufficient sleep is responsible for motor vehicle and machinery-related crashes, causing substantial injury and disability each year. In short, drowsy driving can be as dangerous — and preventable — as driving while intoxicated."<sup>24</sup> <sup>25</sup> While a company can stipulate zero tolerance for alcohol, sleep deprivation can generate similar risks and should be addressed with the same rigor.<sup>26</sup>

## **Worker Health**

Another risk to worker health and workplace productivity that often goes undetected, unattended or misdiagnosed is the presence of a sleep disorder. Related medical conditions can compromise the health and performance of a worker, presenting the risk of error and compromised safety. Add to that the related health care costs, and it behooves employers to encourage employees to seek medical care when a sleep disorder is suspected.<sup>27</sup>

Furthermore, while sleep deficiency may not be associated with a sleep disorder, it can lead to other health compromises and functional limitations. Sleep deprivation is implicated in all kinds of physical maladies, too, from high blood pressure to obesity. Healthy sleep can result in reduced health care costs, as well as improved functioning.

ACOEM Presidential Task Force on Fatigue Risk Management: Lerman, Steven, E. et al (2012) "Fatigue Risk Management in the Workplace," ACOEM Guidance Statement, JOEM, Volume 54, Number 2, February 2012.
 Fact Sheet - Oil and Gas Industry (2010) "Oil and Gas Industry Fatal and Nonfatal

<sup>&</sup>lt;sup>23</sup> Fact Sheet - Oil and Gas Industry (2010) "Oil and Gas Industry Fatal and Nonfatal Occupational Injuries," Bureau of Labor Statistics," April 2010. http://www.bls.gov/iif/oshwc/osh/os/osar0013.htm

<sup>&</sup>lt;sup>24</sup> Centers for Disease Control and Prevention: <a href="http://www.cdc.gov/sleep/">http://www.cdc.gov/sleep/</a>

<sup>&</sup>lt;sup>25</sup> Kuhar, MD, PhD, DABSM, Siobhan (2013) "Drowsy Driving Prevention," SafeNY: <a href="http://www.safeny.ny.gov/drow-ndx.htm">http://www.safeny.ny.gov/drow-ndx.htm</a>

Durmer, Jeffrey S., MD, PhD, Dinges, David, PhD (2005) "Neurocognitive Consequences of Sleep Deprivation," Seminars in Neurology, 2005; 25(1):117-129.

<sup>&</sup>lt;sup>27</sup> Harvard Medical School Division of Sleep Medicine (2010) "The Price of Fatigue: The Surprising Economic Costs of Unmanaged Sleep Apnea, December 2010.

Orfeu M. Buxton, PhD, Karen Hopcia, NP, et al (2012) "Relationship of Sleep Deficiency to Perceived Pain and Functional Limitations in Hospital Patient Care Workers," JOEM, Volume 53, Number 7, July 2012.

<sup>&</sup>lt;sup>29</sup> Czeisler, Dr. Charles A. (October 2006) "Sleep Deficit: The Performance Killer," Harvard Business Review.

<sup>&</sup>lt;sup>30</sup> Connole, Patrick (2013) "Insurers Use Management Tools to Slow Costs for Sleep Disorder Treatment," Health Plan Week, August 5, 2013, Volume 23 Issue 26.

"The Economics of Comfort", coined by Target Logistics, offers a comprehensive service platform to address the housing needs of the oil, gas and mining industries."

The Centers for Disease Control and Prevention states, "New methods for assessing and treating sleep disorders bring hope to the millions suffering from insufficient sleep. Fundamental to the success of all of these efforts is the recognition that sufficient sleep is not a luxury — it is a necessity — and should be thought of as a 'vital sign' of good health."<sup>31</sup>

#### **Economics**

The Economics of Comfort<sup>®</sup>,<sup>32</sup> coined by Target Logistics, offers a comprehensive service platform to address the housing needs of the oil, gas and mining industries, as well as for other organizations requiring temporary workforce lodging. The basic tenet is that investing in the comfort and nutrition of your workforce pays off in:

- Greater productivity
- Lower attrition and absenteeism, as well as reduced health care costs
- Increased safety and injury prevention
- Higher morale

The "Economics of Sleep" also offers a compelling platform and payoffs to best serve your workforce and bottom line:

- Productivity Documented sleep metrics indicate the significant cost of lost productivity due to sleep deficiency and disorders.<sup>33</sup>
- Costs Sleep deficiency and untreated sleep disorders can have attendant health consequences, health care expenses and other costs.<sup>34 35 36</sup>
- Safety Sleep loss and sleep disorders can also lead to compromised safety, a critical factor in the oil, gas and mining industries.<sup>37 38</sup>

<sup>&</sup>lt;sup>31</sup> Centers for Disease Control and Prevention: <a href="http://www.cdc.gov/sleep/">http://www.cdc.gov/sleep/</a>

<sup>&</sup>lt;sup>32</sup> The Economics of Comfort® "Case Study by Target Logistics and Client"

<sup>&</sup>lt;sup>33</sup> MacMillan, Amanda (2011) CNN Health: <u>Insomnia Costs the U.S. \$63 billion annually in the </u>

<sup>&</sup>lt;sup>34</sup> Harvard Medical School Division of Sleep Medicine (2010) "The Price of Fatigue: The Surprising Economic Costs of Unmanaged Sleep Apnea," December 2010.

<sup>&</sup>lt;sup>35</sup> Orfeu M. Buxton, PhD, Karen Hopcia, NP, et al (2012) "Relationship of Sleep Deficiency to Perceived Pain and Functional Limitations in Hospital Patient Care Workers," JOEM, Volume 53, Number 7, July 2012.

<sup>&</sup>lt;sup>36</sup> Institute of Medicine of the National Academies (2006) "<u>Sleep Disorders and Sleep Deprivation: AN Unmet Public Health Problem,</u>" National Academies Press, Washington, DC.

<sup>&</sup>lt;sup>37</sup> Colten, HR and Altevogt, BM, Editors (2006): "<u>Functional and Economic Impact of Sleep Loss and Sleep-Related Disorders</u>," Institute of Medicine (US) Committee on Sleep Medicine and Research.

<sup>&</sup>lt;sup>38</sup> CDC, NIOSH - Workplace Safety & Health Topics: <u>NIOSH Center for Motor Vehicle Safety.</u> See section: *Motor Vehicle Safety: Best Practices in the Oil and Gas Extraction Industry.* 

## The Ecology of Sleep

"Target Logistics takes the environment seriously and recognizes that sleep is part of this equation."

In light of the oil, gas and mining industries' commitment to the environment, a look at sleep's relationship to the environment merits attention, from both a public and personal perspective.<sup>39</sup> The impact on the environment and society from sleep-related accidents is well documented.<sup>40</sup> For the individual, *not* getting enough sleep is *not* sustainable.<sup>41</sup> For many, there is a need to recycle sleep habits. Most people are not aware of sleep's intricacies, or of the impact of insufficient quality and quantity sleep. Short of a sleep disorder that requires diagnosis and treatment, it is often simple shifts in habits and behaviors that can result in sleep improvement. Furthermore, the more we are awake, the more resources we use and the less restored and rejuvenated we are for our waking lives and work. We tax our environment, both externally and internally. Target Logistics takes the environment seriously and recognizes that sleep is part of this equation.<sup>42</sup>

The research and realities send a message: *sleep cannot be overlooked*. Providing your workforce with an optimal sleep environment, along with nutritious foods and fitness facilities, is critical to their performance, morale and well-being. Your workforce is highly trained to do their jobs, with a focus on safety and acumen for specific tasks. However, they are likely not trained how to optimize their sleep, which is often compromised by shifting schedules and other demands. This is an irony since sleep has a direct correlation to their ability to function optimally at work. Sleep-wellness training beckons serious attention.

## SOLUTIONS

The basic requirements for an excellent sleeping environment may seem obvious. But the subtleties are often overlooked or misunderstood. The bedroom is optimally just that, not an entertainment center or auxiliary office. However, the reality for remote lodging is that the bedroom takes on additional functions. Hence, additional strategies and modifications must be communicated to ensure that quality sleep can be achieved.

<sup>&</sup>lt;sup>39</sup> Colten, HR and Altevogt, BM, Editors (2006): "<u>Functional and Economic Impact of Sleep Loss and Sleep-Related Disorders</u>," Institute of Medicine (US) Committee on Sleep Medicine and Research.

<sup>&</sup>lt;sup>40</sup> Harvard Medical School Division of Sleep Medicine: Sleep, Performance, and Public Safety: Costly, Preventable Accidents.

<sup>&</sup>lt;sup>41</sup> Hans P. A. Van Dongen, PhD, et al. (2003) "<u>The Cumulative Cost of Additional Wakefulness: Dose-Response Effects on Neurobehavioral Functions and Sleep Physiology From Chronic Sleep Restriction and Total Sleep Deprivation,</u>" Unit for Experimental Psychiatry, Division of Sleep and Chronobiology, Department of Psychiatry, and Center for Sleep and Respiratory Neurobiology, University of Pennsylvania School of Medicine; Beth Israel Deaconess Medical Center and Harvard Medical School.
<sup>42</sup> Rothaus, Richard, PhD (2013) "Return on Sustainability: Workforce Housing for People, Planet and Profit," White Paper, Target Logistics.

## The Sleep Environment

"Studies have found that mattress firmness has statistically significant effects on both sleep and daytime functioning."

**Dark** – A dark room is integral to falling asleep and to the quality of sleep throughout the sleep period.<sup>43</sup> <sup>44</sup> Even the dimmest light when sleeping can penetrate the eyelids and affect sleep quality. In addition to having all lights out in the room for sleep, blackout curtains provided in superior lodging omit the risk of sleep disturbance from natural and artificial light from outdoors.

**Cool** – The body needs to be cool for sleep, with 68 degrees being an average recommendation. Individual climate control makes this possible.

**Quiet** – The room should be quiet, which a room with good insulation helps ensure. When ambient noise is an issue, quality earplugs offer a solution.

**Bedding Comfort** – A high-quality mattress and bedding are essential comfort components. Studies have found that mattress firmness has statistically significant effects on both sleep and daytime functioning.<sup>45</sup> A mattress and bedding, such as the "Hibernator Sleep System<sup>™</sup>" used in Target Logistics lodges (including a pillow-top mattress, high-thread-count sheets and overstuffed pillows), provide a foundation for the rejuvenating sleep workers need.

# **Best Practices for Healthy Sleep**

shown that there are many influences outside the bedroom that can greatly affect the amount and quality of workers' sleep."

"Research has

In addition to providing workers with a comfortable mattress, bedding, privacy, and noise and light management, oil, gas and mining companies must also think "beyond the mattress" when it comes to ensuring that their workers are getting the sleep they require to perform their jobs safely and productively. Research has shown that there are many influences outside the bedroom that can greatly affect the amount and quality of workers' sleep.

<sup>&</sup>lt;sup>43</sup> Wahnschaffe, A. et al (2013) "Out of the lab and into the bathroom: evening short-term exposure to conventional light suppresses melatonin and increases alertness perception," Institute of Psychology, Charité-Universitätsmedizin, Berlin.

Bjorvatn, Bjoern et al. (2001) "Bright Light Facilitates Circadian Adaptation among Workers at an Oil Platform," Supported in part by The Research Council of Norway.
 Jacobson, Bert H. & Boolani, Ali & Smith, Doug B. (2009) "Changes in Back Pain, Sleep Quality and Perceived Stress After Introduction of New Bedding Systems," Journal of Chiropractic Medicine (2009) 8, 1-8.

For oil, gas and mining companies, making the investment with a premier lodging company is an essential step on the road to good sleep for your workforce. In addition, empowering their workers with a basic understanding of *how* to optimize sleep quality and quantity offers a strategy to ensure a vibrant, productive and motivated workforce. These best practices for healthy sleep can be incorporated in their workforce training. Lodge sites may consider adding sleep tips in the literature they provide their guests.

## Light-Related Strategies

**Put technology to bed or block the blue light** – Exposure to a television, computer, tablet or smartphone in the hour before bedtime can impair sleep due to exposure to blue-spectrum light emitted from these devices. Just when the brain is getting ready for sleep, it receives a confusing signal to be alert. Blue-spectrum light suppresses the release of melatonin, the sleep hormone, potentially decreasing the quality of sleep. <sup>46</sup> Additionally, the brain stimulation from these activities further confuses the brain about transitioning to sleep. If the content is stressful, relaxation for sleep is further compromised.

Away from home in a remote location, workers can't be expected to tune out from technology in the hour before going to sleep. Wearing blue-light-blocking glasses can block 99 percent of the blue-spectrum light, thereby allowing melatonin to be released and the body to transition to sleep naturally.<sup>47</sup>

**Light exposure** – Additionally, blue-light-blocking glasses can be useful to wear when returning to the lodge *after* a night shift *if* it is light outside on the drive home. The morning light tells the body to stay awake, just when the person is intending to go to sleep. Wearing the glasses en route to the lodge preserves the melatonin for your sleep when arriving home.

<sup>&</sup>lt;sup>46</sup> Harvard Medical School (May 2012) <u>Blue Light Has a Dark Side</u>, Harvard Health Letter.

<sup>&</sup>lt;sup>47</sup> Burkhart K., Phelps JR (2009) "Amber Glasses to Block Blue Light and Improve Sleep: A Randomized Trial," University of Toledo, Ohio. http://www.ncbi.nlm.nih.gov/pubmed/20030543

"Providing opportunities and facilities for relaxation and stress reduction are important components of a sleep-supportive environment."

Furthermore, after a good *night's* sleep, getting daily exposure to bright light, especially in the first hour of waking, is optimal. However, for most of us, getting exposure to 30 minutes of direct sunlight on a daily basis is not practical and sometimes not available. Light therapy offers an alternative, especially on dark winter mornings to which many oil, gas and mining workers awaken. Such devices (see <a href="https://www.litebook.com">www.litebook.com</a>) can also serve as a tool to increase alertness in the middle of a night shift when the circadian rhythm, the body clock, is "set" for sleep and the worker is struggling to stay awake. However, it is not recommended to use the light therapy too close to going to sleep.

## Sleep-Promoting Habits and Strategies

**Sleep quantity and quality** – Though sleep needs vary across ages and are impacted by lifestyle, health and other factors, the National Sleep Foundation and most experts recommend from seven to nine hours for adults. 48 49 Sleep quality is also paramount to good sleep and dependent on many factors, a number of which are addressed in this white paper. 50 Often, the *quantity* of sleep one requires is challenged, putting all the more focus on optimizing the *quality* of sleep you do get.

**Exercise** – Exercise is critical to wellness and helps to support healthy sleep. However, exercise should be avoided in the three hours before going to sleep, as the stimulation inherent in exercise can make falling asleep a challenge.

**Relaxation and stress-reduction techniques** – Stress, during the day or during the night if on a night shift, can impact the ability to fall asleep and stay asleep. Hence, providing opportunities and facilities for relaxation and stress reduction are important components of a sleep-supportive environment.

**Nutrition** – Good, healthy foods and beverages are essential to health, day and night. However, in the hours before bed, eating too large a meal can tax the digestive system and compromise sleep. Yet sleep-friendly snacks can help with sleep. Foods containing melatonin and/or tryptophan are good choices, including bananas, oatmeal and almonds. Sleep elixirs such as chamomile tea and almond milk can help the body surrender to slumber.

**Caffeine and Alcohol** – Limiting caffeine and alcohol several hours before bedtime is important. Caffeine acts as a stimulant and can interfere with the quality of your sleep. Alcohol may initially act as a sedative but can disrupt normal sleep patterns.

<sup>&</sup>lt;sup>48</sup> National Sleep Foundation, <u>How Much Sleep Do We Really Need?</u>

<sup>&</sup>lt;sup>49</sup> Centers for Disease Control and Prevention, <u>Sleep and Sleep Disorders</u>

<sup>&</sup>lt;sup>50</sup> Healthy Sleep, Harvard Medical School, <u>External Factors that Influence Sleep</u>

## **ACTION PLAN**

Ensuring that oil, gas and mining workers have the environment, knowledge and strategies required for good sleep requires collaboration.

"Providing lodging that offers an optimal sleep environment is a primary step for the success of your workforce and of your company."

# The Employer

Providing lodging that offers an optimal sleep environment is a primary step for the success of your workforce and of your company. Research supports a call-to-action to take sleep seriously as a vital component to maximize productivity, minimize health care costs and ensure safety. Integrating sleep wellness into your employee wellness program and workforce training may be one of the most effective business investments you can make.<sup>51</sup>

Metrics are integral to prudent decision-making and strategic planning. Combining sleep-related initiatives and sound research data offers an opportunity to gauge results and ROI to ensure that future program design, training and results best serve your goals.

# The Employee

While the sleep amenities provided in quality lodging are conducive to a great night's sleep, each person makes behavior and habit choices that impact the outcome of sleep quality and quantity. As with any behavior modifications, sleep habits do not change overnight. Guidance, accountability and experience can support lasting, positive changes in habits.<sup>52</sup> Empowered with basic sleep knowledge, as well as strategies to "own" their sleep, workers can take full advantage of the state-of-the-art sleep environment provided, awakening refreshed, rejuvenated and ready to do optimal work.

# **The Lodging Provider**

Providing a well-organized, professional lodging experience for oil, gas and mining workers includes an optimal sleeping environment, superior nutrition, fitness facilities, entertainment and relaxation amenities, strict security and excellent service. Combined, these attributes foster the balance of sleep-work-life, a requirement for optimal performance and well-being.

<sup>&</sup>lt;sup>51</sup> OGP & IPIECA, "Managing Fatigue in the Workplace: A Guide for Oil and Gas Industry Supervisors and Occupational Health Practitioners," International Association of Oil & Gas Producers and the International Petroleum Industry Environmental Conservation Association.

<sup>&</sup>lt;sup>52</sup> Duhigg, Charles (2012) The Power of Habit: Why We Do What We Do in Life and Business, Random House, New York.

"The companies that invest in a high-quality sleep environment for their workers realize benefits that include greater productivity and safety and less attrition and sick days."

Hence, *collaboration* of employers, employees and the companies that serve them is key to achieving the best interests, safety and success for all stakeholders. Looking forward, it is essential for both employers and the lodging companies they entrust to house their workforce to explore and implement research-proven policies to ensure that the workers have every opportunity to get the sleep (as well as the nourishment, relaxation and fitness) they need to support peak performance.

## CONCLUSION

While getting the proper amount of sleep is important for any individual, the stakes are higher for oil, gas and mining workers whose health and safety is directly tied to the quality and quantity of the sleep they get. Furthermore, the companies that invest in a high-quality sleep environment for their workers realize benefits that include greater productivity and safety and less attrition and sick days.

Oil, gas and mining companies have an opportunity to embrace sleep wellness, a critical component for the success of their workforce. It starts with the provision of lodging excellence and a quality sleep environment, along with a commitment to train and empower employees with the tools they need to get a great night's sleep.

## **About the Author**

As The Sleep Ambassador® (www.thesleepambassador.com) Nancy Rothstein lectures, consults and educates about sleep wellness to Fortune 500 corporations, institutions, organizations, universities, schools and the public. With an MBA from the University of Chicago's Booth School of Business and decades of consulting and experience in the financial and corporate sectors, Nancy brings an understanding of how sleep impacts productivity, performance and profitability, as well as employee well-being and health care costs. Nancy collaborates with recognized medical sleep experts, as well as with other leaders, researchers, organizations and resources in the field of sleep. An adjunct faculty member at NYU, Nancy teaches an online sleep course. She is the author of My Daddy Snores (Scholastic), which has sold more than 350,000 copies, and the creator and host of The Sleep Radio Show<sup>®</sup>. Serving as a member of the Board of the American Sleep Apnea Association further reflects Nancy's stature in the field of sleep, as well as her commitment to improving people's sleep and lives. She can be reached at nancy@thesleepambassador.com.

# **About Target Logistics**

Target Logistics, an Algeco Scotsman company, operates in some of the world's most remote environments supporting oil, gas and mining operations, government agencies, disaster relief and large-scale events with temporary workforce lodging, mobile crew camps and extended-stay hotels. Named by *Inc.* magazine in 2012 and 2013 as one of "America's Fastest Growing Private Companies," the company has administrative headquarters in Boston; operational headquarters in The Woodlands, TX; and offices in Williston, ND; Denver, CO; Edmonton, AB; and Sydney, AU. Visit www.TargetLogistics.net or call (800) 832-4242.