

SLEEP AND ITS ROLE IN EMPLOYEE HEALTH



goodpath
Employer Health Index

SLEEP AND ITS ROLE IN EMPLOYEE HEALTH

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ABSTRACT

PURPOSE

Sleep is vital. Sleep's role in human health is about more than rest; sleep is necessary for survival. Poor sleep, or sleep that does not adequately restore the body and help its cognitive processing, affects 1 in 3 American employees. For any employer considering healthcare for their employee base, sleep plays a key role in health outcomes and cost.

Despite this, there is a lack of comprehensive reviews of the direct impact of sleep on physical and mental health, and the consequences for employers. This report provides resources to employers and other stakeholders to understand and evaluate the importance of sleep and sleep support approaches.

METHODS

The Goodpath Employer Health Index (GEHI) information series uses data from primary sources on the national and international level, peer-reviewed scientific studies, original analysis, and proprietary data. Given the breadth of this topic, research and analysis covered over 100 different sources across these categories:

- Academic or governmental sources, such as the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and American Academy of Sleep Medicine (AASM)
- Primary scientific data, such as studies peer-reviewed in Journal of the American Medical Association (JAMA), International Journal of Cardiology, and the Journal of Clinical Sleep Medicine
- GEHI proprietary data, including insights from a sample of 2,000 Goodpath sleep assessment respondents from September 2020 to February 2021

RESULTS

Sleep and health are deeply connected. Poor sleep can cause or be caused by numerous physical and mental disorders. Poor sleep is associated with 5 of the 10 most costly health conditions and is highly correlated to mental health disorders, as the risk of developing depression doubles with insomnia. These conditions were made worse by the pandemic.

Poor sleep has direct consequences on employees and employers. There are measurable healthcare costs associated with poor sleep, including at least \$4,267 in direct annual costs per employee with insomnia sleep treatment. Poor sleep can also mask larger costs from impaired physical and mental health. Insufficient sleep also contributes to workplace costs including a 200% increase in workplace accidents, 11.3 work days per employee lost due to reduced productivity, and a 20% decreased level of decision-making.

However, many employers lack proper sleep support programs (67%) and those who do offer support miss the opportunity to offer validated sleep treatment programs that would help mitigate poor sleep's costs.

CONCLUSION

It is critical for employers to recognize the role of sleep on employee health and provide more effective sleep treatment resources for employees. Clinically-validated sleep treatment programs are available and lead to results of employees sleeping longer and without prescription pill dependencies. Using an Action Plan as a tool can help guide employers to resources that keep employees happy, healthy, and productive.

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1. INTRODUCTION

Sleep is vital for survival. It serves two major functions: restoration and memory processing. It occupies around one-third of a human lifetime fulfilling these roles. However, more than 1 in 3 Americans are sleep-deprived. Poor sleep directly affects the workplace and is associated with increased accidents, decreased productivity, and increased healthcare costs.

What Is Good Sleep?

Good sleep is essential for optimal physical and mental health. But, what does good sleep look like? Dr. Ioannis Koutsourelakis, Goodpath's lead sleep doctor, describes the elements of healthy sleep:

- **Sleep Duration:** The total amount of sleep obtained in a 24-hour period. It is recommended that adults get 7-9 hours of sleep per night.
- **Sleep Efficiency:** The ratio of total time spent asleep to time spent in bed. It is recommended that >85% of one's time in bed is spent sleeping. Adequate sleep efficiency leads to deeper, higher quality sleep and improved feelings of being well-rested.
- **Number of awakenings:** More continuous sleep results in more restful sleep.
- **Sleep Quality:** Feeling satisfied with sleep.
- **Sleep Latency:** The amount of time it takes to fall asleep after getting in bed and turning off the lights. It should take 20 minutes or less to fall asleep.

What is Sleep Health?



Sleep Duration

The total amount of sleep obtained in a 24-hour period. It is recommended that adults receive 7-9 hours of sleep per night.



Sleep Efficiency

The ratio of total time spent asleep to the time spent in bed. It is recommended that >85% of one's time in bed is spent sleeping. Adequate sleep efficiency leads to deeper, higher quality sleep and feeling of being better rested.



Number of awakenings

More continuous sleep results in more restful sleep.



Sleep Quality

The subjective assessment of "good" or "bad" sleep.



Sleep Latency

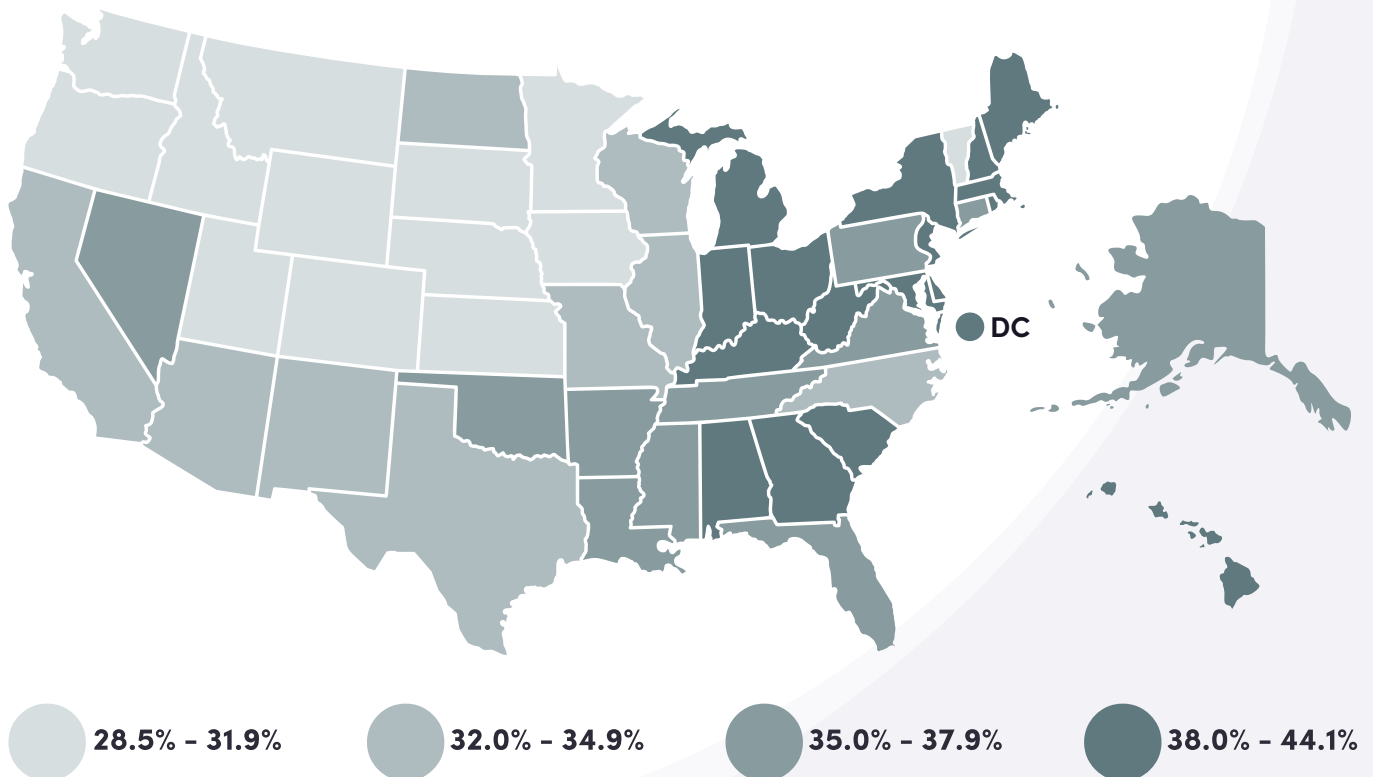
The amount of time it takes to fall asleep after getting in bed and turning off the lights.

What Is Poor Sleep?

Poor sleep or troubled sleep is alarmingly common, with 1 in 3 adults reporting they do not get enough sleep¹. In fact, 65% of adults said that for 5-7 days of the week, their sleepiness negatively impacted their ability to get things done. Further, 47% of adults said that their sleepiness negatively impacted their work performance 5-7 days of the week².

- 1. Poor quality sleep:** Sleep quality is defined as one's satisfaction of the sleep experience, including sleep initiation, maintenance, quantity, and feeling refreshed upon awakening³.
- 2. Changes in sleep patterns:** This is a change in a person's schedule including shifts in bedtime and wake times, as well as nap behavior. This naturally changes over the course of one's life, with the proportion of slow-wave sleep⁴ peaking early in life, declining during adolescence and adulthood, and possibly disappearing after age 60.
- 3. Clinical insomnia:** This is when an individual reports difficulty either falling or staying asleep despite adequate opportunity. This sleep difficulty occurs at least 3 times per week and persists as a problem for at least 3 months, with the result of this impairment being associated with daytime impairment or distress⁵.

Prevalence of Short Sleep (fewer than 7 hours) Among Adults in the U.S.



Source: CDC. Behavioral Risk Factor Surveillance System 2014.

Poor sleep affects employee health and productivity; much more than employers know. It has direct healthcare costs for sleep treatment, yet contributes to even larger costs hidden behind claims for conditions made worse by poor sleep, such as heart disease or depression. Poor sleepers utilize more healthcare and are up to 2x times more likely to develop costly health conditions.

Poor sleep can cause numerous challenges at work, from absenteeism to reduced productivity. Poor sleep contributes to a 200% increase in workplace accidents, 11.3 work days per employee lost due to reduced productivity, and a 20% reduction in decision-making.

Accessing proper sleep treatment programs is paramount for employers who wish to manage employee health and healthcare costs.

SYNOPSIS

**POOR SLEEP AFFECTS
EMPLOYEE HEALTH
AND PRODUCTIVITY;
MUCH MORE THAN
EMPLOYERS KNOW**

2. SLEEP & HEALTH CONDITIONS

Sleep is essential for maintaining all components of our health. Poor sleep is often a predictor of and a contributor to much more serious, long-term health conditions. Normal sleep is needed to maintain optimal physiological processes, including cardiovascular, metabolic, and immune functioning⁶.

Sleep issues are associated with an increased incidence of conditions that are the largest drivers of healthcare expense in the U.S., including:

- Cardiovascular disease
- Diabetes
- Chronic pain (e.g., back pain)

Additionally, sleep apnea is both a condition on its own and a contributor to some of the health conditions above.

Understanding the range of health consequences associated with poor sleep will better prepare employers and stakeholders on how to address poor sleep and why it is of critical importance.

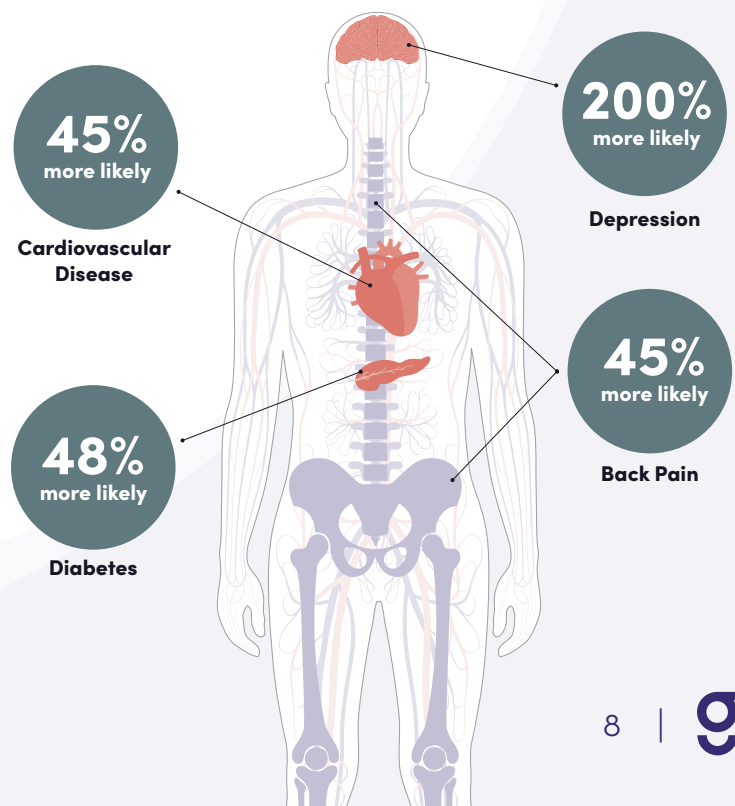
Sleep & Cardiovascular Health

When considering the impact of poor sleep on health, its impact on cardiovascular health cannot be ignored. Heart disease is the leading cause of death in the United States and costs an estimated \$219 billion each year in healthcare costs, pharmaceuticals, and lost productivity⁷.

Sleep disorders are a major risk factor for cardiovascular diseases⁸. Insomnia, in particular, is a significant risk factor for poor cardiovascular outcomes. Having insomnia increases the risk of developing or dying from cardiovascular disease by 45%⁹. Insomnia also increases the mortality rate after a heart attack¹⁰.

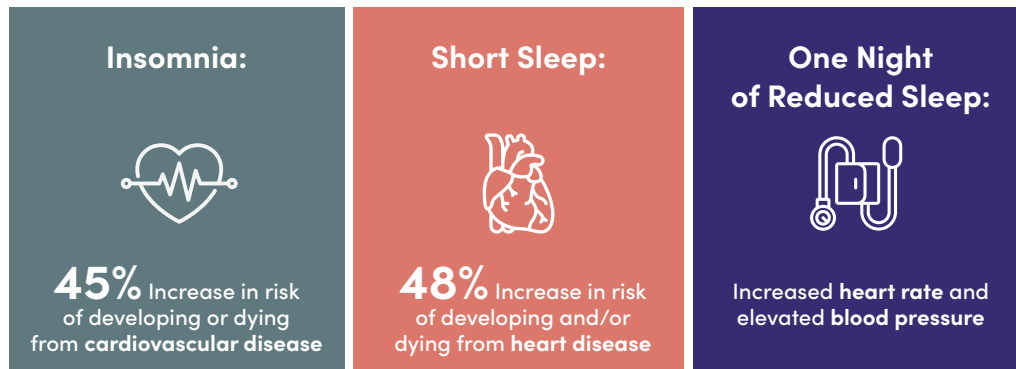
Beyond insomnia, there are additional cardiovascular consequences associated with poor sleep. Short sleep, meaning sleep of fewer

Increased Likelihood of Physical Health Ailments Associated with Poor Sleep



than 5 hours, increases the risk of developing and/or dying from heart disease by 48%¹¹. These effects are also seen regardless of how much sleep is missed. A different study conducted on otherwise healthy, young individuals found that even one night of reduced sleep, only by one-hour, resulted in increases in heart rate and blood pressure, both causing the heart to work harder¹².

Poor Sleep and Cardiovascular Health Consequences



Sleep & Diabetes

Poor sleep is associated with the development of Type 2 diabetes¹³, as sleep problems are linked to glucose intolerance and insulin resistance, both associated with diabetes risk¹⁴.

Short sleep, difficulty initiating sleep, and difficulty maintaining sleep all contribute to an increased risk of developing Type 2 diabetes:

- Short duration of sleep (less than 5–6 hours) was associated with a 28% greater risk of developing type 2 diabetes¹⁵,
- Difficulty initiating sleep was associated with a 57% greater risk of type 2 diabetes¹⁶,
- Difficulty maintaining sleep was associated with an 84% greater risk of type 2 diabetes¹⁷

Looking at the prevalence of diabetes in the US, more than 34 million Americans, or 10% of the population, have Type 2 diabetes¹⁸. Diabetes significantly reduces quality of life and is the 7th leading cause of death in the U.S.¹⁹. From a financial perspective, this disease costs \$327 billion per year in direct medical costs and reduced productivity²⁰. Addressing sleep's role in diabetes should be a priority for employers.

Sleep & Physical Pain

Poor sleep is associated with increased physical pain. Troubled sleep can both exacerbate pain and be caused by pain²¹. In one study, 35% of poor sleepers and 63% of insomnia sufferers report back pain, versus 18% of good sleepers²². In the Goodpath Employer Health Index (GEHI) Sleep Assessment data (Box 1), 1 in 5 people experienced disturbed sleep because of pain.

BOX 1: GOODPATH EMPLOYER HEALTH INDEX (GEHI) SLEEP ASSESSMENT DATA

The foundation of Goodpath's sleep treatment is the Sleep Assessment. Individuals who are seeking help for sleep problems take this comprehensive assessment, with 50+ questions. The assessment was designed by the Goodpath medical team covering symptoms, medical history, and contributing factors to assess each condition. From September 2020 to February 2021, a random sample of 2,000 responses were analyzed and the data is included in this report.

Musculoskeletal (MSK) pain, including back pain, is the largest source of expenditure in US healthcare²³. In 2016, employer-paid treatment of MSK pain was \$190 billion. In 2021, employers will spend more than \$320 billion treating MSK pain²⁴. Poor sleep leads to worse overall physical functioning. Given the fact that poor sleep also increases the risk of developing a pain condition by 200% to 300%²⁵, treating poor sleep should be a concern for employers.

Obstructive Sleep Apnea

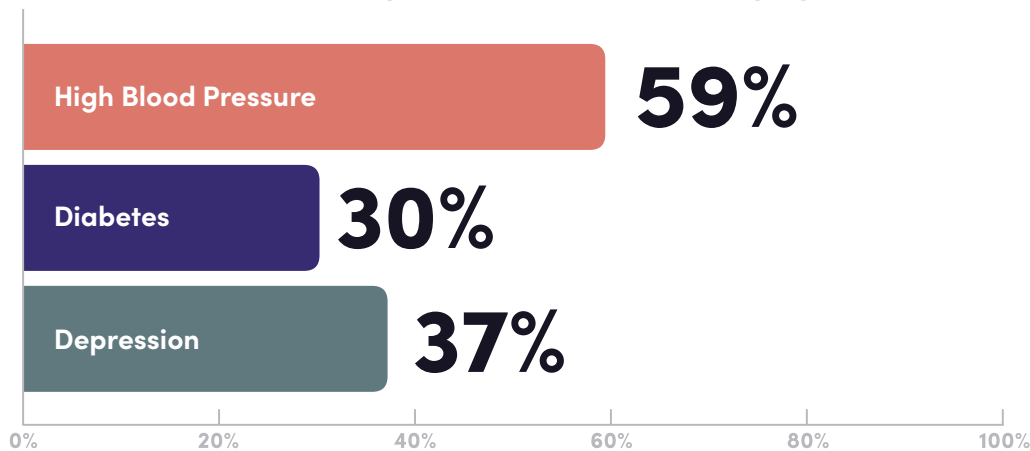
Obstructive sleep apnea (OSA) is a serious medical condition that comes from breathing periodically stopping during sleep²⁶. Obstructive Sleep Apnea is the most common form of sleep apnea and occurs when the throat muscles relax and the airway (trachea) narrows or closes completely for a period of time²⁷.

Obstructive sleep apnea is a specific sleep problem that can have serious consequences. Sleep apnea affects a person's ability to sleep and causes daytime fatigue. It is also associated with other potentially serious and costly comorbidities. The American Academy of Sleep Medicine cites OSA as a major public health and safety risk²⁸, as OSA increases the risk of developing:

- High blood pressure
- Heart disease
- Diabetes
- Stroke
- Depression²⁹
- High cholesterol
- Asthma³⁰
- Fatigue
- Anxiety
- Tobacco, Alcohol, and Cannabis Disorders
- Migraines³¹

The risk of comorbidities is significant in people with OSA. In a 2020 study of the burden of OSA, 59% of people with OSA had high blood pressure, 30% had diabetes, and 37% suffered from depression. OSA disturbs sleep, but the impacts are farther-reaching, contributing to the development of serious comorbidities that decrease quality of life and increase healthcare costs³².

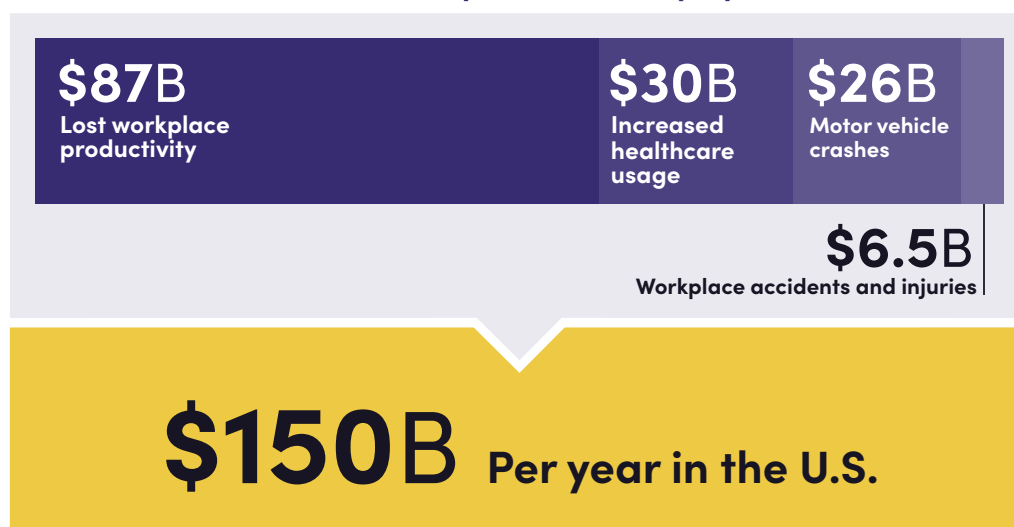
Common, Costly Comorbidities With Sleep Apnea



Percentage of people with sleep apnea who have select comorbidities

The incidence of OSA has increased in the last 20 years³³. In a global review from 2020, it was estimated that 1 billion people have obstructive sleep apnea³⁴. In a random sample of data collected from September 2020 – February 2021 from the GEHI Sleep Assessment, 54% of respondents were at risk for sleep apnea. This risk was more prevalent among men than women, with 84% of men at risk for mild, moderate, or severe sleep apnea compared to 46% of women.

Financial Consequences of Sleep Apnea



In addition to multiple health-related outcomes, OSA is associated with significant economic costs borne by multiple stakeholders, including individuals, employers, insurance companies, and even society³⁵. Sleep apnea increases the risk for motor vehicle accidents by 3 times and workplace accidents by 2 times³⁶. A white paper commissioned by the American Academy of Sleep Medicine estimated the total societal-level costs of obstructive sleep apnea to exceed \$150 billion per year in the United States, including \$87 billion because of lost workplace productivity, \$30 billion because of increased healthcare use, \$26 billion because of motor vehicle crashes, and \$6.5 billion because of workplace accidents and injuries³⁷.

For employers, mitigating sleep apnea in its early stages is an important part of employee health and controlling healthcare expenses.

SYNOPSIS

THE AMERICAN ACADEMY OF SLEEP MEDICINE ESTIMATED THE TOTAL SOCIETAL-LEVEL COSTS OF OBSTRUCTIVE SLEEP APNEA TO EXCEED \$150 BILLION PER YEAR IN THE UNITED STATES

Behaviors, Habits, & Poor Sleep

Lifestyle habits and behaviors can be detrimental to healthy sleep. Poor sleep quality has been associated with smoking, sugary drink consumption, and physical activity³⁸.

SLEEP & DIET

Food and drink intake, including caffeine and alcohol, can cause disruptions in sleep.

Acid reflux and gastroesophageal reflux disease (GERD) are two ways this can occur. Acidic and fried foods and carbonated beverages, coffee, and alcohol are often associated with acid reflux. Those with gastroesophageal reflux disease (GERD) have reflux that lasts longer and irritates the esophagus. In either case, lying down to sleep is likely to worsen the symptoms and interfere with sleep. In fact, per the American Gastroenterological Association, 75% of adults with GERD have difficulty sleeping and functioning the next day³⁹.

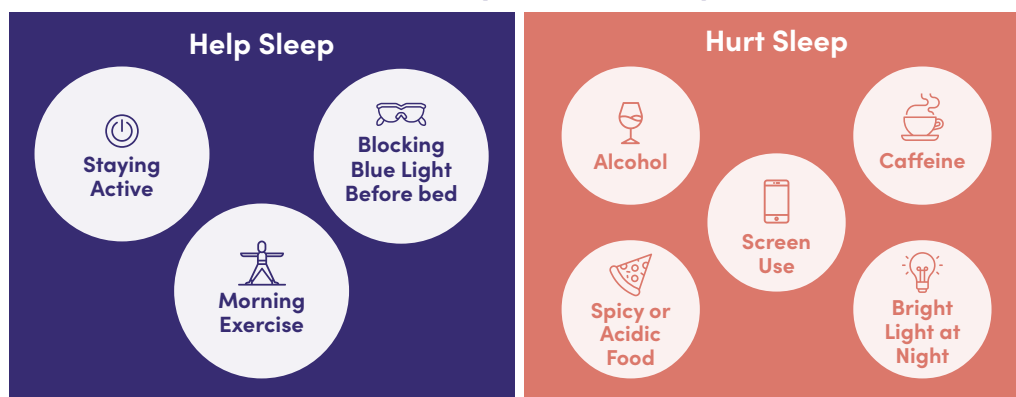
Stimulants, like caffeine, negatively impact sleep. Consuming caffeine fewer than 4 hours before bedtime can interfere with sleep⁴⁰. Coffee is not the only caffeine culprit; it can be found in chocolate, teas, and energy drinks. Of those who took the Goodpath assessment to begin improving their sleep, 43% of respondents reported that they consume caffeine. Even some common supplements like ginkgo or ginseng may have stimulant effects that can affect sleep.

Alcohol reduces the quality of sleep. Alcohol has been demonstrated to replace deep (REM) sleep with lighter, lower quality sleep⁵¹. Alcohol also fragments sleep, causing wakefulness throughout the night⁴².

SLEEP & PHYSICAL ACTIVITY

Physical activity and sleep are interrelated⁴³. Exercise has been proven to help individuals with chronic insomnia fall asleep faster and sleep longer, and was just as effective as hypnotic drugs⁴⁴. Moderate to vigorous aerobic exercise has been proven to improve insomnia, with 67% of participants in a study reporting an improvement in their symptoms after beginning an exercise regimen⁴⁵. Aerobic exercise also improved sleep efficiency, sleep duration, and sleep latency⁴⁶. Additionally, mind-body exercise, like yoga, has been proven to aid sleep, improving insomnia symptoms as well as improving stress resistance⁴⁷. Morning exercise is recommended for optimal sleep⁴⁸.

How Our Lifestyles Affect Sleep



SLEEP & LIFESTYLE

Light exposure and technology use also negatively impact sleep⁴⁹. Exposure to bright light, particularly at night, can change circadian rhythms, as well as decrease sleepiness and increase alertness⁵⁰.

Technology use is associated with later bedtimes and shorter sleep⁵¹. This is due to the blue light emitted from devices, which can suppress melatonin and increase alertness⁵². Blocking the blue light from technology, through interventions such as tinted glasses, has been shown to improve sleep duration and quality and reduce the severity of insomnia⁵³. In the Goodpath assessment, 43% of respondents reported using a screen before bed and reported having trouble sleeping.

Employer Consequences

Poor sleep is associated with 5 of the 10 most costly health conditions: heart disease, high blood pressure, heart attack, diabetes, and back pain⁵⁴.

Sleep problems, like obstructive sleep apnea, can exacerbate poor sleep and are associated with other costly conditions. For example, sleep apnea is estimated to cost \$30 billion due to increased healthcare use. It also costs \$87 billion in lost workplace productivity and \$6.5 billion from workplace accidents and injuries.

For self-insured employers, poor sleep could be directly contributing to healthcare costs, but could also be hidden by other health conditions and claims. With healthcare costs consistently rising each year⁵⁵, managing spend depends on controlling costs and improving employees' overall health. Since sleep is linked to multiple health conditions, any efforts to improve employee health should include sleep programs.

SYNOPSIS

POOR SLEEP COULD
BE DIRECTLY
CONTRIBUTING TO
HEALTHCARE COSTS,
BUT COULD ALSO BE
HIDDEN BY OTHER
HEALTH CONDITIONS
AND CLAIMS

3. SLEEP & MENTAL HEALTH

Mental health and sleep are interconnected. Dr. Ioannis Koutsourelakis, Goodpath's lead sleep specialist, explains: "Sleep disorders can be both a symptom and a cause of mental health disorders." When either sleep or mental health worsen, the other can follow.

That interplay may be obscured, with the focus frequently on the mental health condition. Additionally, sleep and mental health are often treated separately, rather than together. However, it is critical for employers and stakeholders to understand this relationship to then find appropriate solutions.

An analysis by Willis Towers Watson predicts that mental health will make up the largest portion of medical spending increases in the next 5 years⁵⁶. Given the increasing prevalence of mental health problems in the workforce, employers focusing on employee health and well-being should consider the relationship between sleep and mental health.

SYNOPSIS

SLEEP DISORDERS CAN BE BOTH A SYMPTOM AND A CAUSE OF MENTAL HEALTH DISORDERS

The Stress, Sleep, & Anxiety Cycle

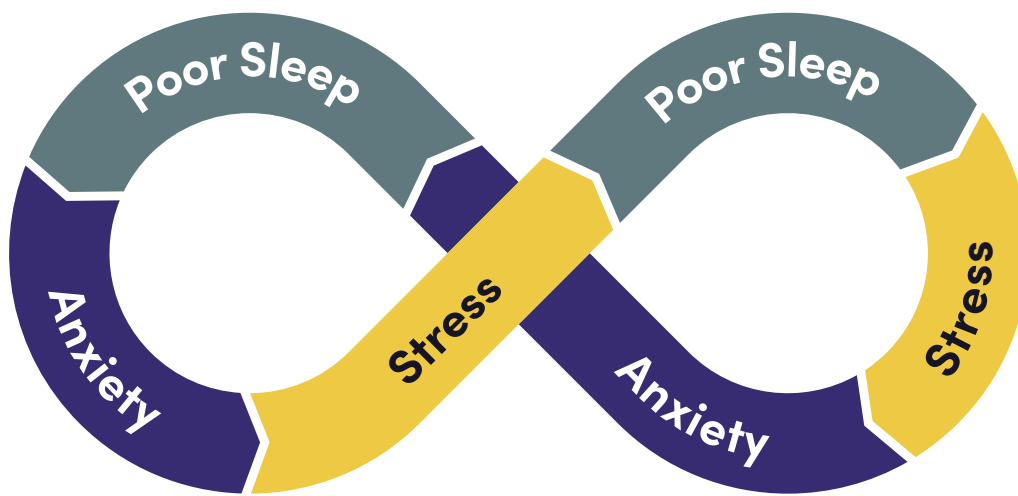
Stress and sleep are intimately connected, forming a pattern called the stress-sleep cycle. Any level of psychological stress makes sleep worse⁵⁷ and, as stress increases, so do sleep difficulties⁵⁸. In turn, sleep difficulties then increase stress and reduce one's ability to manage stressors⁵⁹. Sleeping fewer than 5 hours per night is associated with a 200% increased risk of higher stress, implying that less sleep could impair one's ability to manage stress⁶⁰.

Relationship Between Reduced Sleep & Stress



Dr. Ioannis Koutsourelakis explains the relationship between stress and sleep. When faced with a stressor, hormones such as adrenaline and cortisol are released. These hormones trigger the "fight or flight" response, which includes heightened alertness and increased heart rate and blood pressure. Being at a heightened state of alertness due to stress can delay, interrupt, and shorten sleep.

The Sleep, Stress, and Anxiety Cycle



Putting this in context for employers, stress at work can translate to poor sleep. Employees already experience high levels of stress. In a 2020 survey of large employers, 43% of employees reported they were experiencing symptoms of burnout, including physical or emotional exhaustion, or intense anxiety about work⁶¹. With the stress-sleep cycle, that work-related stress may then get worse, leading to employee burnout.

In the Goodpath Employer Health Index (GEHI) sleep assessment data (see Box 1), a majority of respondents report stress, with 2 out of 3 reporting a strong feeling of stress. The highest stress rating, "feeling stressed frequently," was selected by 61% of respondents. The level of stress reported differed by gender, with 64% of women reporting feeling frequently stressed versus 47% of men. This reflects a common trend, with studies finding that women are almost twice as likely to be stressed as men⁶².

The level of stress reported in the GEHI data was associated with sleep disorders. Frequently stressed respondents were more likely (61%) to have moderate to severe insomnia symptoms than those only sometimes stressed (45%).

The GEHI data also found a relationship between anxiety and sleep disorders. When a sleep assessment respondent reported anxiety, they were 40% more likely to also have moderate to severe insomnia symptoms than non-anxious respondents. For those with moderate to severe anxiety, 64% also had moderate to severe insomnia symptoms. However, for those with mild or no anxiety, only 46% had moderate to severe insomnia symptoms.

This link between insomnia and anxiety is reflected in studies. A meta-analysis found that, when someone is diagnosed with insomnia, they are three times more likely to suffer from anxiety⁶³.

With the close link between sleep, stress, and anxiety, these findings signal that there may be a larger issue at play. With a significant number of employees reporting high stress levels and burnout, sleep problems may already be present. Addressing sleep, in tandem with efforts to combat stress and burnout, can be a powerful combination to help employees.

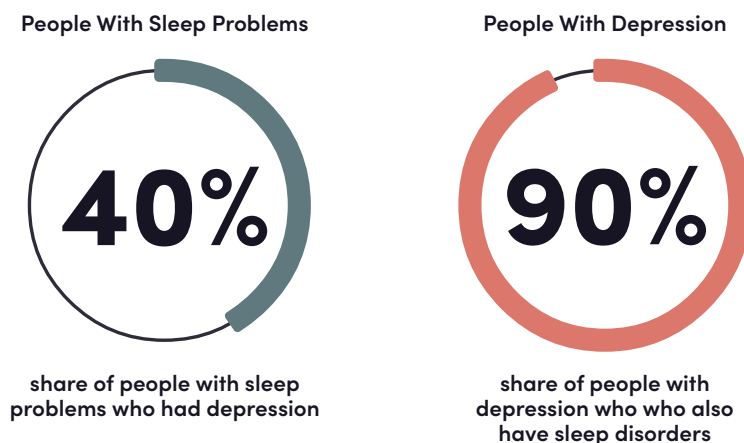
Sleep & Depression

Like stress and anxiety, depression also affects sleep. Sleep and depression are interrelated, with poor sleep contributing to depression and depression contributing to poor sleep. Helping employees manage depression has become a focus area for employers.

TROUBLED SLEEP CONTRIBUTES TO DEPRESSION

Trouble sleeping is a predictor of depression⁶⁴. Clinically-diagnosed insomnia is highly correlated with depression⁶⁵, and insomnia triples the risk of developing depression⁶⁶. Around 40% of patients with depression had sleep challenges prior to developing the condition⁶⁷. People with insomnia have statistically higher rates of depression, anxiety, and stress than good sleepers⁶⁸.

Depression & Sleep



Poor sleep may also reduce the ability to deal with stressful life events. In one study, poor sleepers were more likely to develop depression after a stressful life event versus good sleepers⁶⁹.

DEPRESSION CONTRIBUTES TO TROUBLED SLEEP

Suffering from depression also leads, in turn, to poor sleep, and depression is a strong predictor of later insomnia⁷⁰. Suffering from a disorder like depression increases the risk of developing chronic insomnia⁷¹. In fact, 90% of depressed patients report sleep disorders⁷².

SYNOPSIS

CLINICALLY-DIAGNOSED INSOMNIA IS HIGHLY CORRELATED WITH DEPRESSION, AND INSOMNIA TRIPLES THE RISK OF DEVELOPING DEPRESSION

Employer Consequences

Many employers are increasingly focused on managing stress and improving the mental health of their employees. It is obvious that sleep plays a key role in that activity. As sleep and mental health are intertwined, treatment should address both. Any effort to address stress or mental health should also offer proper support for sleep to achieve optimal results for employees. Similarly, treating sleep disorders can alleviate mental health symptoms, so sleep support programs should be screened to ensure they are comprehensive and also address mental health.

Chapter 7 of this report and the GEHI Action Plan for Sleep & Employee Health provide resources for employers to consider.

4. SLEEP CHANGED WITH THE PANDEMIC

As with any major disruption in our lives, sleep patterns are often affected. This has been especially true of the sleep patterns that have emerged as a result of the pandemic.

While research on the full physical and emotional consequences of the pandemic is ongoing, it is clear that sleep problems worsened in 2020 in the U.S. and worldwide.

How Sleep Changed

Multiple studies show that while there is no one consistent way in which sleep changed with the pandemic, the one constant is that sleep did change.

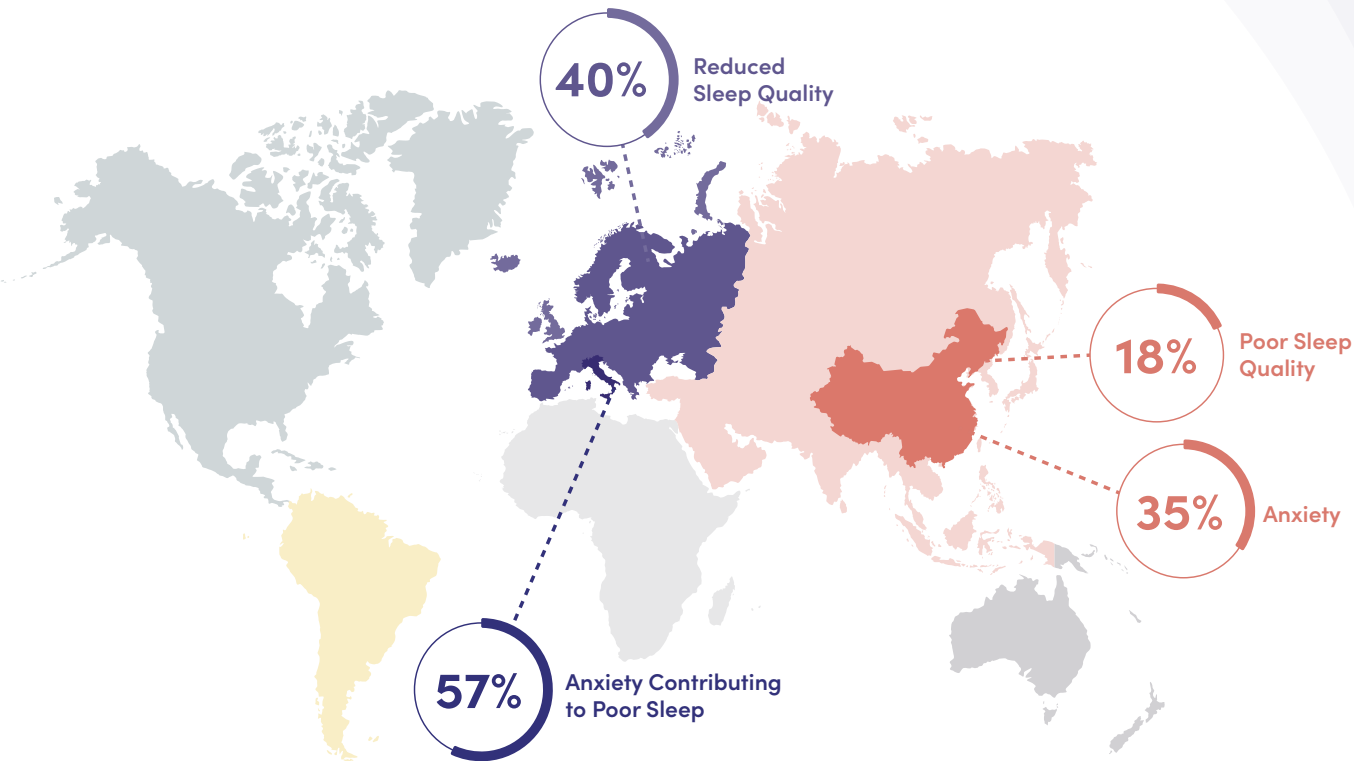
POOR QUALITY SLEEP AND INCREASED ANXIETY

An increase in the incidence of poor quality sleep started early in the pandemic. One of the first studies of sleep and mental health was conducted in China in 2020. Based on a survey, 18% reported poor sleep quality. Depressive symptoms arose in 20% of those surveyed and 35% reported generalized anxiety disorder⁷³.

These findings were consistent across other studies. In a multi-continental study conducted from March to April 2020 across respondents in Israel, South America, and Europe, among other locations, 40% reported reduced sleep quality. The group that was more severely impacted included those in quarantine, women and workers whose livelihoods were impacted by the pandemic⁷⁴.

A study of sleep patterns in Italy found 57% of participants reported pandemic-related anxiety as the cause of lost sleep. Looking more closely at the levels of anxiety, “32% reported high anxiety, 42% high distress, and 8% reported PTSD symptomatology linked to COVID-19”⁷⁵.

Global Increases of Poor Quality Sleep with Pandemic



CHANGES IN SLEEP PATTERN

The length of time sleeping also changed with the pandemic, though with many variations. While some people were sleeping less, some were sleeping more. Others had either difficulty falling asleep or staying asleep.

In a UK-based study, more than 2 out of 3 people (69%) reported a change in sleep patterns. However, people alternated how their sleep had changed: 35% slept less than before the pandemic and 31% slept more. Other variations included disrupted sleep (42%), falling asleep unintentionally (35%), and difficulty falling or staying asleep (31%)⁷⁶.

Changes in Sleep Patterns During the Pandemic



CORONASOMNIA

The prevalence of insomnia as a reaction to COVID-19 has given rise to the term “coronasomnia”, which is how some doctors and media describe the increase in insomnia and other sleep disorders since February 2020 when the pandemic accelerated. This phenomenon refers not only to those recovering from COVID-19, but also to a larger number of people whose lives have been turned upside down by fear about the virus, concerns about loved ones, not being able to work, and social isolation.

While coronasomnia is triggered by elements unique to this pandemic, the symptoms of it are much like that of traditional insomnia. Two main symptoms of coronasomnia are difficulty falling asleep and difficulty staying asleep. Difficulty falling asleep is when people are unable to fall asleep even after spending an average of 30 minutes in bed. Difficulty staying asleep means waking up at least once during the night and struggling to get back to sleep for an average of 30 minutes. The interrupted sleep means a decrease in both sleep quantity and quality.

Other symptoms often found are the feeling of waking up unrefreshed, feeling fatigued or sleepy during the day, or impaired productivity at work. Sometimes, fatigue and sleepiness can lead to hypersomnia, which is sleeping too much, yet the quality of sleep is poor.

Goodpath sleep expert, Dr. Ioannis Koutsourelakis, says “coronasomnia’ is a simple way for people to describe a broad spectrum of sleep disorders arising from the pandemic. The term is distinct; the experience is not. It will take months and years following this pandemic to determine the full scope of the effects of coronasomnia on the global populace.”

SYNOPSIS

"IT WILL TAKE MONTHS AND YEARS FOLLOWING THIS PANDEMIC TO DETERMINE THE FULL SCOPE OF THE EFFECTS OF CORONASOMNIA ON THE GLOBAL POPULACE"

Coping Techniques Used During the Pandemic for Poor Sleep

People sought a number of ways to address their changes in sleep. Some turned to prescription medicine, to increased alcohol use, or to unhealthy sleep behaviors.

PRESCRIPTION MEDICATION

From the start of the pandemic, the usage of prescription medication increased. A study conducted from February 16 – March 15, 2020 by Express Scripts, the prescription delivery service, found that the number of prescriptions filled for sleep disorders increased by 15% compared to the same period in 2019⁷⁷. In a global study across 49 countries, participants increased sleeping pill consumption by 20%⁷⁸. It is important to note that prescription sleeping pills are not recommended for long-term treatment of insomnia.

ALCOHOL CONSUMPTION

Consumption of alcohol increased with the pandemic. A 2020 study published in The International Journal of Environmental Research and Public Health found that almost 2 out of every 3 participants (60%) reported that their drinking had increased compared to before COVID-19⁸⁰. Another study by the American Psychological Association, found that nearly 1 in 4 adults (23%) increased their alcohol consumption to cope with the stress induced by COVID-19⁸⁰.

DELAYED BEDTIME OR 'REVENGE BEDTIME PROCRASTINATION'

Another trend that grew with the pandemic was delaying bedtime or “revenge bedtime procrastination.” This is the deliberate decision to delay or even sacrifice sleep in order to increase or reclaim leisure time that was lacking during the day. In one study in the UK in 2020, 30% of respondents reported experiencing later bedtimes during the pandemic⁸¹.

Employer Consequences

As the pandemic has changed sleep habits, employees have had trouble finding effective solutions to help with sleep. This in turn may affect employees' concentration and productivity.

This situation presents an opportunity for employers to assist employees. As employers navigate plans for pandemic-related work policies, adding in sleep support can be a natural way to communicate care for employees.

Employees both trust and turn to employers for assistance for health issues. By expanding the definition of workplace health to include the key role that sleep plays, employers can make an important contribution to employee well-being.

5. SLEEP & THE COST IN THE WORKPLACE

Given the fact that 1 in 3 adults do not get enough sleep⁸², every workplace is affected by the lack of sleep. Employees who do not get enough sleep may not perform their best at work and typically cause increased healthcare expenses. This is a costly and challenging problem for employers.

Poor sleep among employees is linked to many negative outcomes that affect both the individual employee as well as the company. Lack of sleep or poor quality sleep is linked to:

1. Higher usage of healthcare, including medication⁸³, costing employers more in claims
2. Higher incidence of workplace accidents⁸⁴
3. Reduced productivity at work⁸⁵
4. Trouble with concentration, listlessness, and decision-making⁸⁶
5. Higher rates of absenteeism⁸⁷

All of this adds up to sizable economic costs for employers tied to poor sleep.

Impact of Poor Sleep in the Workplace



SYNOPSIS

EMPLOYEES WHO DO NOT GET ENOUGH SLEEP MAY NOT PERFORM THEIR BEST AT WORK AND TYPICALLY CAUSE INCREASED HEALTHCARE EXPENSES

Greater Healthcare Costs & Utilization

Employees who suffer from sleep disorders have higher healthcare costs than good sleepers. Sleep disorders contribute to higher healthcare costs in two ways:

1. The direct costs of treating the disorder, and
2. Overall poorer health that leads to additional healthcare spending

A 2015 study by the National Safety Council found that an employer with 1,000 employees can save \$536,000 in healthcare costs per year through sleep improvement programs⁸⁸.

INCREASED HEALTHCARE COSTS FOR INSOMNIA TREATMENT

In a study of costs associated with insomnia, individuals with insomnia had an average annual healthcare cost \$4,267 greater than employees without insomnia (\$11,206 for individuals with insomnia vs. \$6,939 for those without)⁸⁹.

A significant contributor to the difference in healthcare costs for those with insomnia is pharmaceutical spend. A notable number (75%) of people with insomnia are prescribed medication, many for 4+ months duration, even though it is recommended only for short-term use⁹⁰. While medication helps short-term management of insomnia, it also may have dangerous side effects of daytime sedation, cognitive impairment, and risk of dependence⁹¹.

INCREASED HEALTHCARE COSTS BEYOND INSOMNIA TREATMENT

Sleep problems are often a cause and a result of other medical conditions, leading to additional healthcare costs. When insomnia-specific treatments (e.g., medication) were removed from the cost analysis above, individuals with insomnia still had 85% higher healthcare costs than those without insomnia⁹². Those costs are linked with the treatment of comorbidities that poor sleep increases the risk of developing (e.g., cardiovascular disease⁹³, diabetes⁹⁴).

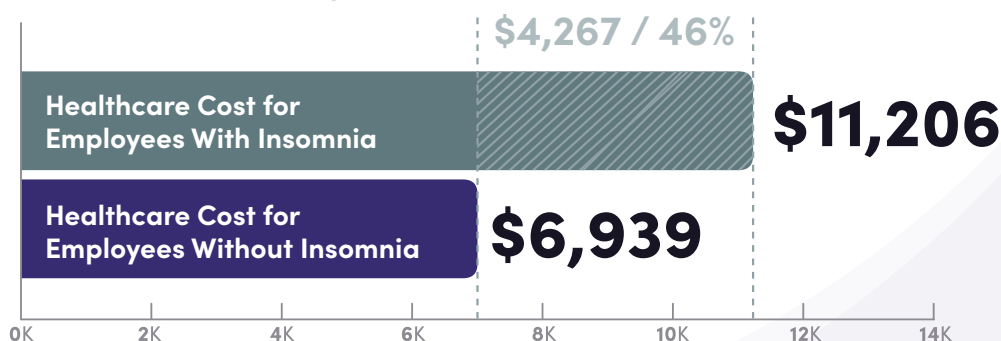
SYNOPSIS

EMPLOYEES WHO SUFFER FROM SLEEP DISORDERS HAVE HIGHER HEALTHCARE COSTS THAN GOOD SLEEPERS

SYNOPSIS

INDIVIDUALS WITH INSOMNIA HAD AN AVERAGE ANNUAL HEALTHCARE COST \$4,267 GREATER THAN EMPLOYEES WITHOUT INSOMNIA

Poor Sleep and Annual Healthcare Utilization



More Workplace Accidents

Sleep is linked to workplace safety as well. Not getting enough sleep, or getting poor quality sleep, leads to a higher risk of accidents and errors. While this is important for all types of companies, in high-risk industries, such as healthcare, aviation, manufacturing, and transportation, an error or accident can cause major injury, even death. In industries not considered high-risk, such as consulting or retail, an error or accident can lead to financial costs, reputational damage, and more.

Employees reporting sleep disorders are twice as likely to have an accident at work and 1.5 times as likely to cause an error⁹⁵. Insomnia leads to a disproportionate share of the cost of workplace accidents. Based on simulations, an estimated 7.2% of all costly workplace accidents and errors are connected to insomnia. However, the disorder makes up 24% of the total cost of accidents and errors⁹⁶. As a result, insomnia is projected to be associated with 274,000 accidents and errors per year and a combined cost of these accidents of \$31.1 billion⁹⁷.

Accidents and Errors in Workplace Due to Poor Sleep



In industries where safety is paramount, such as trucking, the risk of poor sleep cannot be underestimated. The U.S Department of Transportation estimates that driving while drowsy is responsible for 1,550 fatalities and 40,000 nonfatal injuries every year⁹⁸. Daytime sleepiness accounts for 20% of motor vehicle accidents⁹⁹.

With sleep linked to workplace safety, improving employee sleep must be a top priority.

Lost Productivity & Decreased Work Quality

Poor sleep impairs one's ability to work, hurting productivity, creativity, and the overall work environment. Poor sleep is linked to presenteeism¹⁰⁰, which is the loss of productivity while in the workplace due to impairment from a condition. This loss of productivity from poor sleep directly affects the business's bottom line. Additionally, a reduction in creativity can adversely affect innovation and competitiveness.

SYNOPSIS

THIS LOSS OF PRODUCTIVITY FROM POOR SLEEP DIRECTLY AFFECTS THE BUSINESS'S BOTTOM LINE. ADDITIONALLY, A REDUCTION IN CREATIVITY CAN ADVERSELY AFFECT INNOVATION AND COMPETITIVENESS

Each year, 11.3 work days per worker are lost to reduced productivity from poor sleep¹⁰¹. In fact, lost productivity accounts for more lost work days than absenteeism¹⁰².

A large study of employees attributed a \$1,967 loss in productivity per year per worker to poor sleep¹⁰³. Employees who got less than 5 hours of sleep per night had twice the productivity loss of those who got 8 hours¹⁰⁴.

Lost productivity costs are 72% higher in those with moderate to severe insomnia than for those who sleep well¹⁰⁵. In total, lost productivity due to insomnia is estimated to cost U.S. employers close to \$66 billion per year in 2017 dollars¹⁰⁶.

Cost of Lost Productivity Caused by Poor Sleep

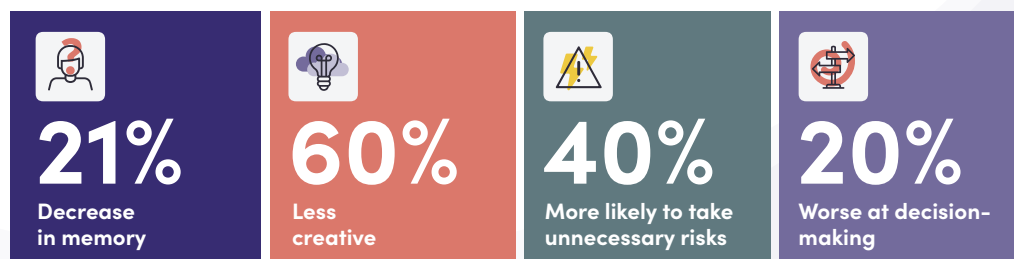


Employees themselves recognize the importance of sleep; 86% of respondents in a large multi-workplace study responded that a good night's sleep impacts their ability to fully contribute at work¹⁰⁷. A significant portion (40%) of poor sleepers report that their sleep problem influences their work capacity¹⁰⁸, a number that is likely under-reported. This diminished work capacity means that employees had a reduced desire to perform, decreased effort, and performance impairment¹⁰⁹. Trouble sleeping also resulted in a 10.3% decrease in work efficiency¹¹⁰. Additionally, 69% of respondents reported a decreased ability to focus at least 5 days a week due to sleepiness¹¹¹.

Poor sleepers also report challenges with their memory, creativity, effectiveness, and decision-making¹¹². Employees who do not sleep well are 20% worse at decision-making compared to those who are well-rested¹¹³. Poor sleepers are also 40% more likely to take unnecessary risks¹¹⁴. Additionally, memory tests show that lack of sleep causes a 21% decrease in recall quality and accuracy¹¹⁵.

REM, or deep sleep, enhances creativity¹¹⁶. Poor sleepers are 60% less creative than good sleepers¹¹⁷. Creativity is necessary for developing innovative products and solving complex problems, both critical tasks for a business to remain competitive.

Work Quality Consequences of Poor Sleep in Workforce



Higher Rates of Absenteeism

Sleep disorders increase the likelihood that an employee will miss work. Studies have shown that poor sleepers miss 5 extra days per year than good sleepers¹¹⁸ and are 14% more likely to miss work in any given week than good sleepers¹¹⁹. This absenteeism costs employers an extra \$976 per year¹²⁰. Sleep improvement programs can help employers and employees gain back valuable time.

Absenteeism



Employer Consequences

With 1 in 3 adults not getting enough sleep, employers are incurring additional costs. Baseline healthcare costs are 26% higher and over time insomnia can result in an average cost of \$4,267 more per employee compared to those without this condition.

Sleep disorders can also cause accidents in the workplace. Employees reporting sleep disorders are 200% more likely to have an accident at work. The result is 274,000 accidents and errors per year linked to poor sleep, which costs \$31.1 billion.

Some of these costs can be mitigated through sleep improvement programs which have shown to save employers \$536,000 in healthcare costs. Offering effective, accessible sleep programs supports both the health of the employee and the company.

6. EMPLOYER SLEEP PROGRAMS & SUPPORT

Given that sleep affects every facet of our lives, including our ability to perform at work, employers should be factoring sleep improvement programs into their overall health and wellness strategy in an effort to strengthen all aspects of their business.

Improving employee sleep can provide benefits ranging from decreased healthcare costs to increased innovation, and consequently employers should prioritize actions to help their workforce manage and improve sleep. To do so, companies should consider the: 1) type and quality of sleep improvement programs available and, 2) the current work environment's impact on employee sleep.

Absence of Sleep Programs in the Workplace

In 2020, 33% of employers offered some type of sleep support program¹²¹. This 33% covers a wide range of approaches to sleep support, ranging from those with proven results to those that are popular, but not yet validated. Proven sleep programs can include sleep training programs or cognitive behavioral therapy for insomnia (CBT-I). Not yet validated but still popular sleep support can include features like nap rooms and access to meditation apps (see following section for more detail).

This 33% of employers offering sleep programs is an increase from 25% in 2019, but still a far cry from the 53% who said, in 2019, that they would offer such programs¹²². Considering that sleep is a key element for maintaining health, this number is also noticeably low.

Employers increasingly recognize the importance of supporting all aspects of their employees' well-being. This includes physical and mental and emotional health, and also elements such as work-life balance, financial health, and work-life balance. Increasing emphasis has been placed on mental and emotional health, with 95% of employers now offering benefits to employees¹²³.

While this is a positive trend, the lack of emphasis on sleep is a noticeable omission. Employers are investing in employees' mental health (69% of employers offer teletherapy, 50% offer stress management, and 49% offer resiliency programs¹²⁴). However, far fewer offer support for sleep (33%). This gap presents a challenge in supporting mental health, as sleep directly affects one's mental health, stress management, and resiliency. Poor sleep makes us twice as responsive to stress¹²⁵ and 44% less resilient¹²⁶.

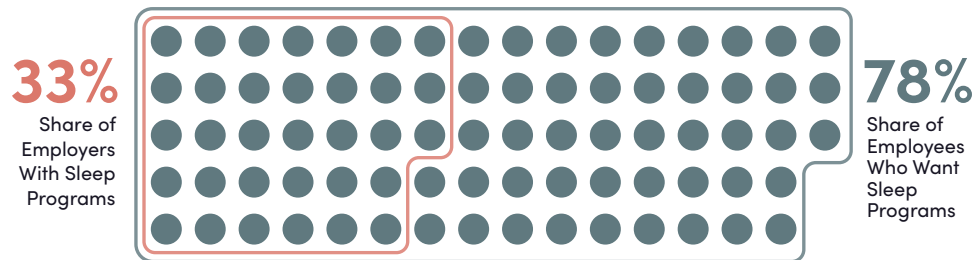
Without also offering sleep programs, the effectiveness of these mental health programs will be limited. Adding a sleep program alongside other efforts will increase overall impact on well-being and return on investment.

SYNOPSIS

IMPROVING EMPLOYEE SLEEP CAN PROVIDE BENEFITS RANGING FROM DECREASED HEALTHCARE COSTS TO INCREASED INNOVATION

Employees recognize the importance of good sleep. Even though only 33% of employers offer sleep programs, 78% of employees would value an employer-provided sleep program¹²⁷. Additionally, 44% of employees surveyed said that “quality of sleep significantly impacted their ability to fully contribute at work”¹²⁸. Research confirms that poor sleep negatively impacts work contributions, with insomnia accounting for 11.3 days of lost work productivity per year, costing an estimated \$2,280 per person in lost company capital¹²⁹.

Presence Of & Demand For Employee Sleep Support



Employees clearly care about their sleep, notice the effect of it on their work performance, and are looking for help from their employers. Employer-sponsored sleep programs would certainly have employee buy-in given the awareness of this issue.

Evaluating Employer-Provided Sleep Programs

The range of potential employer-offered sleep improvement programs is quite large. One meta-analysis of sleep programs found ten distinct interventions, with many more available¹³⁰. Some companies offer medically-validated sleep treatments, such as Cognitive Behavioral Therapy for Insomnia (CBT-I). Others offer a more educational approach, with courses like “How to fall asleep faster”¹³¹.

Sleep Support Offered by Employers

Category	Support	Clinically Endorsed to Treat Sleep Problems?*	Virtual or In-Person
Sleep Treatment Well-rounded sleep care, validated in literature to treat sleep problems	CBT-I	✓	Both
	Integrative Care	✓	Both
Sleep Support Single-method approach for sleep assistance, limited research	Sleep Training Apps		Virtual
	Sleep Tracking Apps		Virtual
	Nap Pods / Sleep Rooms		In-Person
	Sleep Information / Tips		Both
General Wellness Support that may help sleep, but sleep is not the primary focus	Yoga		Both
	Meditation Apps		Virtual
	Wearables		In-Person

*A ✓ indicates that this method can be used to treat sleep problems. There is evidence in medical literature that the treatment is effective. The method is endorsed by leading medical organizations, such as the American Academy of Sleep Medicine.

Considerations for Employer-Provided Sleep Programs:

1. Is the intervention validated? Is there a study confirming the efficacy?
2. Is the program guided or self-directed? Is the intervention delivered by a facilitator or does the user go through the steps on their own?
3. How is the program delivered? In-person or digitally?

The question of research and medical validation is an important one. There has been a rise in the use of Consumer Sleep Technology (CST), i.e., devices that monitor and/or track sleep, including many popular mobile apps¹³².

There are claims that CSTs improve sleep quality and screen for problems, however, there is insufficient data supporting those claims¹³³. The Food and Drug Administration (FDA) has not approved CSTs for either purpose¹³⁴. The American Academy of Sleep Medicine (AASM) issued a statement in 2018 on CST (sleep app) devices, stating that they can be tools to enhance an interaction with a clinician, but **are not substitutes for medical intervention** and need to be FDA cleared¹³⁵.

Spotlight: Digital CBT-I for Insomnia

Cognitive Behavioral Therapy for Insomnia (CBT-I) is a highly effective, evidence-based therapy that helps individuals modify their behaviors and thought patterns to improve sleep. CBT-I is shown to improve sleep in 70–80% of people with insomnia and reduce or eliminate sleeping pill use in 90% of participants¹³⁶. When compared to sleeping pills, CBT-I was more effective and provided longer-lasting results¹³⁷. Unlike sleeping pills, CBT-I has no side effects and can be used long-term to support healthy sleep¹³⁸. Additionally, for those who also have depression, adding CBT-I to treatment with antidepressants was found to double the remission rate of depression, as compared to medication alone¹³⁹.

CBT-I works by training the brain for sleep. Over the course of training, a person learns about sleep and becomes familiar with their own sleep patterns. They use this approach to identify negative thoughts, emotions, and behaviors associated with sleep. They then use cognitive and behavioral techniques, learned through CBT-I, to change them.

CBT-I is considered the “first-line treatment for insomnia” by leading researchers and clinicians, including the American Academy of Sleep Medicine, American College of Physicians, and the Department of Veterans Affairs. The American College of Physicians recommends CBT-I as the first-line treatment of insomnia, rather than medications¹⁴⁰. With over 29 million prescriptions dispensed for sleep medications in 2018 – causing dangerous side effects such as sleep driving – offering employees CBT-I is a highly effective, high value, and safe solution to improve sleep¹⁴¹.

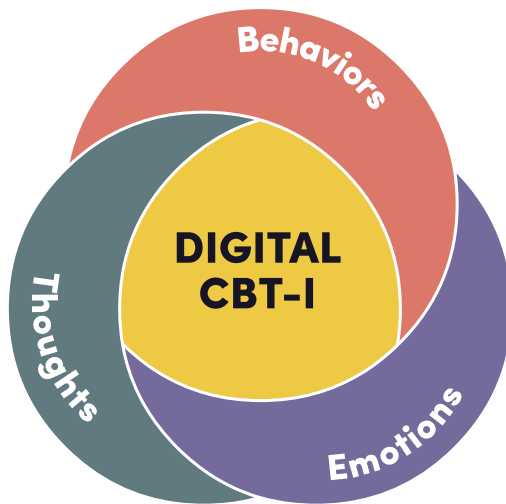
SYNOPSIS

THE AMERICAN ACADEMY OF SLEEP MEDICINE (AASM) ISSUED A STATEMENT IN 2018 ON CST (SLEEP APP) DEVICES, STATING THAT THEY CAN BE TOOLS TO ENHANCE AN INTERACTION WITH A CLINICIAN, BUT ARE NOT SUBSTITUTES FOR MEDICAL INTERVENTION

SYNOPSIS

THE AMERICAN COLLEGE OF PHYSICIANS RECOMMENDS CBT-I AS THE FIRST-LINE TREATMENT OF INSOMNIA, RATHER THAN MEDICATIONS

What is Digital Cognitive Behavioral Therapy for Insomnia?



CBT-I is a program that helps users identify and replace thoughts and behaviors that cause or worsen sleep problems with habits that promote good sleep.

A scientifically-proven treatment for insomnia, without drugs or side effects.

CBT-I can be delivered in-person or digitally. As employers look to make benefits more accessible to employees, particularly in light of the growing adoption of digital solutions (many as a result of COVID-19), offering CBT-I digitally is an attractive option. Digital solutions are more accessible to users, affordable for employers¹⁴², and support clinical best practices.

When compared to in-person CBT-I, users of digital therapy had 13% better sleep quality¹⁴³. Digital CBT-I also costs less per person than in-person therapy¹⁴⁴. With the use of digital CBT-I, users improved their sleep efficiency by 20%, reduced their time to fall asleep by 26 minutes, and increased the length of time slept by 74 minutes¹⁴⁵. Notably, users had a 40% improvement in daytime performance, including both their concentration and productivity¹⁴⁶.

Benefits of Digital CBT-I



Spotlight: Integrative Care for Sleep

Integrative care brings together conventional and complementary approaches to health in a coordinated way¹⁴⁷. The National Center for Complementary and Integrative Health (NCCIH) describes integrative care as a “patient-focused approach to health care and wellness, often including mental, emotional, functional, spiritual, social, and community aspects”¹⁴⁸. This approach treats the whole person¹⁴⁹. Integrative care has been rigorously studied by leading institutions such as Harvard, Duke, Cleveland Clinic, and UCSF.

Integrative care for sleep prioritizes conservative approaches such as lifestyle changes and mind-body interventions over more aggressive treatments like prescription medications. Mind-body approaches to improving sleep have been studied and proven to be effective. One such treatment is mindfulness-based stress reduction (MBSR), an “intensive mindfulness training to promote understanding, acceptance, and reduction of suffering”¹⁵⁰. In one study, MBSR alleviated insomnia symptoms and improved sleep quality to the same level as FDA-approved sedative hypnotic medications¹⁵¹. MBSR is also shown to improve both depression and anxiety symptoms¹⁵². Other forms of mindfulness meditation have also been shown to improve sleep quality and reduce total wake time¹⁵³.

How the Workplace Affects Sleep

No review of this topic would be complete without understanding how the workplace affects sleep. Stress at work is a frequently cited cause of poor sleep¹⁵⁴. Workers who

report high job stress are at almost double the risk of suffering from insomnia¹⁵⁵. Additionally, 27% of adults prioritize work over sleep¹⁵⁶.

Long Work Hours Leads to Shorter Sleep



As an example of job stress affecting sleep, a meta-analysis revealed that significant physical, psychological, social, or organizational stressors increased the risk of disturbed sleep by 38%[^].

Long work hours also contribute to shorter sleeping times. Working more than 40 hours per week increases a worker's risk of shortened sleep by 50%. Working more than 55 hours per week increases the risk of shortened sleep by 263%¹⁵⁸.

Clearly, what happens in the workplace affects sleep. These factors, in turn, affect company performance. Employers can help break this cycle by offering sleep programs as part of their health and wellness strategies. Reducing job stress and solving sleep problems in tandem can help employees improve their overall health and prevent workplace productivity losses¹⁵⁹.

SYNOPSIS

WHAT HAPPENS IN
THE WORKPLACE
AFFECTS SLEEP. THESE
FACTORS, IN TURN,
AFFECT COMPANY
PERFORMANCE

Implications for Employers

Currently there is a mismatch in demand and supply of employer-offered sleep programs. While 78% of employees desire a program, only 33% of employers offer them. For those employers that do offer sleep support, as well as those considering which programs to offer, it is important to recognize that many methods of treatment have not undergone rigorous testing. Employers also need to review the role that the workplace has on sleep problems and insomnia. Workers who report high job stress are at almost double the risk of suffering from insomnia.

Fortunately, there are approaches available to employers that are clinically proven to be effective. One method, Cognitive Behavioral Therapy for Insomnia (CBT-I), is proven to be highly effective in improving sleep for 70–80% of insomnia patients and without the need for prescription sleeping pills. It is recommended as the first-line treatment approach for insomnia.

7. HELPING EMPLOYEES IMPROVE SLEEP

Sleep is a critical component of physical and mental health as well as optimal work performance. Consequently, employers should include sleep programs as part of health and wellness offerings to employees.

In addition to the positive impact on employee physical and mental health, employers will see the benefit of improved sleep through higher productivity, creativity, and reduced healthcare costs. As 78% of employees report valuing an employer-provided sleep program, the data indicates that employee engagement would likely be high.

Action Plan for Sleep Health

Helping employees improve their sleep is possible. The following strategies can support employers as they launch successful sleep programs.

NORMALIZE SLEEP AS A COMPONENT OF HEALTH

Sleep can frequently be an afterthought for employees, particularly when the demands of life and work require valuable time. Just as employer well-being programs emphasize movement and stress relief, they should also emphasize the importance of good sleep. Two components of this are educating employees about sleep and creating a culture that values sleep. To do this, employers can:

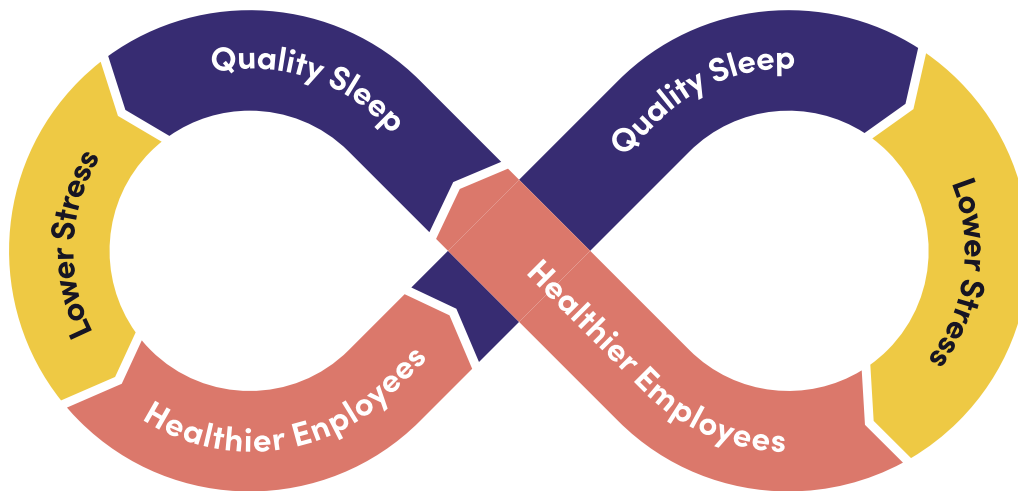
- Launch informational campaigns about the importance of sleep and the effects of both good and bad sleep
- Publicly commit to sleep as a component of health and well-being
- Encourage company leaders to talk about sleep health and model good sleep habits
- Emphasize and implement healthy work-life boundaries, such as a “No emails after 8pm” policy
- Treat sleep problems like any other health condition, such as allowing employees to use sick leave for sleep-related issues

Company public statements are a powerful way to commit to employee well-being and enhance a focus on healthy behaviors. For example, the American Bar Association and 205 of its member organizations signed a well-being pledge, focused on mental health and substance use in the profession¹⁶⁰.

Such strategies can be used to communicate the commitment of employers to the

health and well-being of their employees. These are an important step in the process of normalizing health and well-being in company culture.

The Sleep & Employee Health Cycle



GIVE EMPLOYEES THE RIGHT TOOLS

Employees should be provided with evidence-based sleep programs. Treatments like CBT-I are rigorously evaluated to confirm effectiveness. While consumer sleep applications have been gaining popularity, they are not substitutes for the medical treatment of poor sleep, as stated by the American Academy of Sleep Medicine¹⁶¹. Similarly, popular meditation and mindfulness applications used on their own may not be enough to fully address sleep problems. When looking to add a sleep program, employers should look for the following components:

- Evidence-based techniques and treatments
- Programs supported by healthcare practitioners
- Aligned with workforce needs, e.g., mode of delivery, accessibility, etc.

CHOOSE A COMPREHENSIVE PROGRAM

Poor sleep can be complicated and challenging to manage. There are many potential causes and one employee may have multiple contributing factors. For example, an employee who wakes up in the middle of the night may suffer from acid reflux linked to their diet. Another may struggle to fall asleep, as they lie awake at night recounting their to-do list. To help the most employees, the sleep program selected should be able to address a wide range of sleep problems.

Sleep health does not occur in a vacuum. The best way to support an individual employee is to consider the whole person, beyond just physical symptoms. Mental, emotional, work/family, environmental and other factors must be considered in

SYNOPSIS

TO HELP THE MOST EMPLOYEES, THE SLEEP PROGRAM SELECTED SHOULD BE ABLE TO ADDRESS A WIDE RANGE OF SLEEP PROBLEMS

treatment. Integrative approaches, that include both conventional and complementary approaches, work best.

Goodpath's Sleep Offering

Goodpath offers integrative sleep programs, which take the individual into account. The sleep programs are comprehensive and easy to follow. Each person's program is customized to their unique needs and goals and includes dynamic updates.

SPOTLIGHT: INTEGRATIVE CARE

Integrative care brings together conventional and complementary approaches to health care in a coordinated way¹⁶². The National Center for Complementary and Integrative Health (NCCIH) describes integrative care as a "patient-focused approach to health care and wellness, often including mental, emotional, functional, spiritual, social, and community aspects"¹⁶³. This approach treats the whole person rather than "one organ system"¹⁶⁴. Integrative health prioritizes conservative approaches such as lifestyle changes and mind-body interventions over more aggressive treatments like surgery. Integrative care has been rigorously studied by leading institutions such as Harvard, Duke, Cleveland Clinic, and UCSF.

GETTING STARTED

Goodpath sleep treatment starts with a brief, comprehensive online sleep assessment. The assessment, developed by Goodpath's medical team, helps to understand an individual's unique condition, potential contributors to poor sleep, and goals for the program. After completing the assessment, the user begins their personalized program.

WHOLE-PERSON SLEEP CARE

Goodpath's sleep treatment is designed to care for the whole person. Alongside specific techniques and solutions, each Goodpath member is paired with a health coach for one-on-one support. The coach supports the member and updates their program based on changing needs and goals.

Goodpath's whole person care is anchored around 4 key elements: Cognitive Behavioral Therapy for Insomnia (CBT-I), mind-body, nutrition, and supplements, medicines, and products:

- CBT-I: Goodpath's CBT-I program was developed by a multidisciplinary medical team, led by a sleep specialist, and based on evidence-based research. CBT-I is a highly effective, evidence-based therapy that helps individuals modify their behaviors and thought patterns to improve sleep.
- Mind-Body: The sleep program utilizes techniques to decrease central nervous

system activity and support relaxation. This includes digital relaxation components, such as progressive muscle relaxation, guided imagery meditation, online yoga, and a sleep journal shipped to your home.

- **Nutrition:** Diet can affect sleep. The Goodpath sleep program includes guidance on diet, and, when appropriate, 1:1 support from a registered dietician who will review your diet and provide recommendations to help improve your sleep.
- **Supplements, Medicines, and Products:** Goodpath ships selected items, based on individual sleep needs, to each person's home. Herbal supplements like L-theanine or chamomile tea help lessen anxiety, promote relaxation, and improve sleep quality. Products, like blue light blockers or sleep masks, address issues in the sleep environment.

The components of Goodpath's treatment are evaluated and chosen based on demonstrated efficacy and appropriateness for the member. Each member receives a comprehensive plan and detailed instructions to ensure they receive the care they are looking for immediately.



What Next?

Sleep is a critical component of health and wellbeing. Sleep also plays a significant role in employees' effectiveness and productivity at work. Employers are uniquely positioned to help their employees improve their sleep health and have an opportunity to make a significant impact by offering comprehensive sleep support.

For more information on helping employees improve sleep, and to share this information with your employee base, download a summary of the Sleep Action Plan [here](#).

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