The Nightmare of Sleep in Prison

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The research for this report began in a graduate-level public policy and law course at The LBJ School in 2022. We are grateful for the student team that worked on this project in the course: Josh McClain, Destiny Moreno, Vanessa Chebli, and Erin Luby. Their careful research and thoughtful analysis of the material helped shape both the direction and depth of this report. We also thank Erin Grossman, a graduate student employee at the Prison and Jail Innovation Lab (PJIL), who helped us to update that research, and Kelly Davis, a journalist with experience writing about corrections issues, who provided editorial guidance on an early version of the report. We are also grateful to Allison Paranka, PJIL's Administrative Coordinator, whose thoughtful work on the final design and formatting helped bring the report together.

From the outset, we recognized that sleep in custody cannot be meaningfully analyzed solely through academic research. To ensure our analysis reflected the experiences of people who have been incarcerated, we convened a group we called "Advisors with Direct Experience Project Team" (ADEPT), an advisory group of formerly incarcerated people from multiple states. ADEPT members brought perspectives shaped by incarceration in multiple states from diverse regions of the country. We met with ADEPT advisors on multiple occasions during the project's information-gathering stage, engaging in conversations that informed our understanding of the issues. We are deeply grateful to Jennifer Toon (Director, Lioness), John Fabricius (Praxis Initiative), and Jose Hamza Saldana (Director, RAPP—Release Aging People in Prison Campaign) for sharing their time, experience, and insights with us. ADEPT members highlighted issues for us to focus on, sharpened our analysis, and grounded our recommendations in the realities of daily life in custody.

This report draws extensively on the accounts of incarcerated and formerly incarcerated people whose written accounts we relied on throughout our research. Essays, interviews, and first-person narratives published in outlets such as The Marshall Project, the Prison Journalism Project, and San Quentin News provided critical insight into the lived experience of sleep in custody. These accounts deepened our understanding of how institutional practices are experienced on the ground and helped ensure that this report reflects an analysis of the human realities behind the operational policies and practices that shape the sleep environment in prisons and jails.

We extend our appreciation to oversight bodies that helped make the conditions described in this report visible. We are especially grateful to the New Jersey Office of the Corrections Ombuds and the Hawaii Correctional System Oversight Commission for permitting the use of images documenting prison conditions in their states. We also relied on publicly available pictures of

prisons in Washington State and Maine. These materials provide an invaluable window into conditions that are otherwise difficult for the public to see and understand.

To better understand how sleep-related practices are shaped by operational realities, we also consulted with current and former corrections leaders. We are grateful to the officials who spoke with us on the condition of anonymity, including one who led correctional agencies in two different states and another who previously served as a corrections administrator and later as a federal court monitor. Their candid reflections on institutional constraints, safety considerations, and opportunities for reform strengthened the report's practical grounding and persuaded us that our recommendations are both reasonable and workable.

We had the opportunity to present the research for this report in two forums. We first presented at the annual conference of the International Corrections and Prisons Association in Antwerp, Belgium in 2023, and we were enormously grateful for the positive reception we received from several correctional leaders. We knew we were on the right path with this project when we received feedback that these officials had never considered the serious implications of these issues until our presentation, and that they were eager to make immediate changes within their agencies. Advocates and oversight practitioners at that conference similarly endorsed our findings and recommendations. Our second presentation on this topic was a joint event with Professor Sharon Dolovich of UCLA Law School and Jennifer Toon, a member of ADEPT, held at the LBJ School in February 2026, and we are very grateful for the insightful feedback and responses from attendees.

As this report was being finalized, Professor Sharon Dolovich published an important law review article, "Sleep Deprivation in Prison," in the *Southern California Law Review*. Although the timing of our report prevented us from incorporating her article into our research, we want to highlight her impressively researched work in these Acknowledgments. Her methodology, which included semi-structured interviews with 39 formerly incarcerated individuals, yielded findings remarkably similar to our own, providing further evidence that this topic demands the attention of policymakers, corrections officials, and advocates. Professor Dolovich's scholarship also highlights the constitutional dimensions of the issues we examine. While the overlap in our projects is entirely coincidental, we hope that our combined voices underscore the urgency and importance of the sleep issue. We are grateful for Professor Dolovich's sustained contributions to the legal and policy conversations surrounding prison conditions.

Finally, the PJIL team deeply appreciates Arnold Ventures for its support of our work to bring more transparency and humanity to prison conditions. Their investment has been instrumental in advancing our work and making this report possible.

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Executive Summary

Sleep is a central, yet largely unexamined, factor shaping health, behavior, and safety in prisons and jails. "The Nightmare of Sleep in Prison" examines how routine conditions and operational practices in carceral settings systematically disrupt sleep and how those disruptions impact the health and safety of incarcerated people and staff.

Drawing on sleep science, interdisciplinary research, firsthand accounts from currently and formerly incarcerated people, and examples from correctional systems across the country, the report shows that sleep in prisons and jails is too short and chronically interrupted. Physical conditions such as inadequate mattresses, shared sleeping spaces, constant lighting, excessive noise, and extreme temperatures impede the body's ability to remain asleep. Operational practices, including early wake-up schedules, middle-of-the-night counts, medication distribution, and irregular meal timing, further compress sleep in ways that conflict with the body's natural sleep-wake cycle. During the day, limited access to meaningful activity, insufficient exposure to natural light, and nutritionally inadequate food impair the biological processes that support sleep at night.

These conditions and operational practices are often justified as necessary for the safety and security of incarcerated people and staff. This report shows otherwise. When sleep is disrupted night after night, incarcerated people experience impaired emotional regulation, reduced impulse control, heightened stress reactivity, and worsening physical and mental health. In congregate, high-stress environments, these effects increase volatility, strain interactions between staff and incarcerated people, and elevate the risk of conflict, disciplinary incidents, medical emergencies, and self-harm. In other words, routine conditions and operational practices that routinely interrupt sleep do not enhance safety—they frequently erode it.

Poor sleep in prisons and jails is not incidental or an inevitable byproduct of incarceration. It is a predictable outcome of how facilities are designed and operated. Improvements are both feasible and already underway in some states and local jurisdictions. Agencies across the country have modified count procedures, adjusted daily schedules, improved mattresses and bedding, reduced nighttime noise and lighting, and expanded daytime programming. While many of these changes were made for reasons unrelated to sleep, they have contributed to improved sleep without compromising safety and security.

Building on this evidence, the report offers practical, operationally grounded recommendations that corrections agencies can implement without statutory change. These reforms focus on protecting uninterrupted sleep periods, reducing unnecessary nighttime disruptions, improving physical sleeping conditions, strengthening daytime structure, and fostering safer housing environments. They treat sleep not as a superfluous comfort, but as a core operational condition that supports health and behavior while maintaining the safety of everyone who lives and works in these facilities.

Chronic sleep disruption is counterproductive to the goals of running safe and secure prisons and jails. Aligning correctional conditions and practices with what we know about restorative sleep will mitigate risk, reduce conflict, and improve outcomes for both incarcerated people and staff.

Recommendations

1. Install "normal" beds raised off the floor
2. Improve the quality of mattresses and bedding
3. Increase personal space for sleep
4. Increase the amount of dedicated, uninterrupted sleep
5. Redesign nighttime count protocols to avoid waking people overnight
6. Reduce loud, disruptive noises during designated sleep periods
7. Replace fluorescent lighting or use light covers
8. Provide eye masks and ear plugs to incarcerated people
9. Maintain nighttime temperatures within the optimal range for supporting sleep
10. Improve interactions between staff and incarcerated people
11. Keep people busy and active during the day
12. Normalize meal timing and improve food quality

I. Introduction

Sleep is as fundamental as any human need. Yet for millions of people incarcerated in prisons and jails, it is not treated as such. Nights behind bars are shaped by factors entirely beyond an incarcerated person's control—lights that never fully shut off, loud and persistent noise, shared sleeping spaces, deteriorated mattresses, unregulated temperatures, and schedules that routinely undermine the normal sleep process. Rather than serving as a source of restoration, sleep is often fragmented, poorly timed, and insufficient, with consequences that impact the health and safety of incarcerated people.

A large and well-established body of research demonstrates that high-quality sleep is essential for immune function, cardiovascular health, metabolic regulation, and the healthy functioning of virtually every physiological system.[1] Sleep also plays a central role in emotional regulation, learning, memory consolidation, impulse control, and stress management—functions that shape behavior, decision-making, and overall well-being.[2] When sleep is persistently disrupted, these systems begin to break down, impacting how people think, feel, and behave.

Sleep science is equally clear about the conditions required for restorative sleep. Healthy sleep depends on regular sleep-wake timing, darkness and quiet at night, limited interruptions, physical comfort, and sufficient time to complete full sleep cycles.[3] What happens during the day also matters. Exposure to natural light, physical movement, cognitive engagement, and predictable routines help regulate circadian rhythms and build the pressure necessary for consolidated sleep. When these conditions align, sleep becomes deeper, more continuous, and more restorative.

Yet the physical environment and routine operations of most prisons and jails are misaligned with these requirements. Most housing units are characterized by constant artificial lighting, amplified noise, crowded sleeping arrangements, and inadequate bedding. Routine operational practices, such as overnight counts and welfare checks, early-morning medication lines, and pre-dawn meal schedules, interrupt sleep and fragment it into short, irregular intervals. These practices are not designed with sleep in mind; instead, they reflect the operational priorities and logistical demands of operating and managing the facility.

Disrupted sleep environments are not unique to prisons and jails. Many people experience poor sleep due to work demands, caregiving responsibilities, and stress, but outside the carceral setting, individuals retain some ability to modify their environment—adjust lighting, change

[1] Matthew Walker, *Why We Sleep: Unlocking the Power of Sleep and Dreams* (London: Penguin Books, 2018), 3–4, 157, 164–165.
[2] Walker, *Why We Sleep*, 307–9.
[3] Sharon Brok, "5 Simple Changes to Your Bedroom for Better Sleep," *Stanford Lifestyle Medicine*, October 21, 2025, https://lifestylemedicine.stanford.edu/bedroom-changes-sleep-routine/.

mattresses, alter schedules, or seek treatment. In prison and jail, those options do not exist. The conditions that shape sleep are imposed, routine, and unavoidable.

Decades of research show that chronic sleep disruption has profound physical and mental health consequences and is associated with increased mortality risk.[4] Sleep deficiency is linked to cardiovascular disease, diabetes, stroke, and immune dysfunction, as well as depression, anxiety, and elevated suicide risk.[5] Sustained sleep loss also affects behavior. It reduces impulse control, slows reaction time, impairs judgment, and increases irritability and emotional volatility. In congregate settings already marked by stress, like prisons and jails, these effects are magnified. People who are sleep-deprived are more prone to conflict and less able to regulate behavior, creating conditions that can undermine both personal safety and institutional order.[6]

These realities raise an important and often-overlooked question: how do routine operations in prisons and jails impact the ability of incarcerated people to obtain restorative sleep, and how might those practices be improved? Rather than treating sleep loss as an individual condition or an inevitable feature of incarceration, this report examines how standard practices in prisons and jails systematically disrupt sleep and considers how they can be better aligned with the sleep process.

How do routine operations in prisons and jails impact the ability of incarcerated people to obtain restorative sleep, and how might those practices be improved?

The report begins by examining why sleep matters and how inadequate sleep affects health and behavior. It then describes what sleep looks like inside prisons and jails, drawing on firsthand accounts from currently and formerly incarcerated people. Next, it identifies the factors that drive sleep disruption in these facilities, including environmental conditions and institutional routines that conflict with restorative sleep. The report then highlights examples from states and local jurisdictions that have begun addressing these issues. Finally, it offers practical recommendations that corrections agencies could implement to promote healthier sleep, while respecting the dignity of those in custody and supporting institutional safety.

Improving sleep will not, on its own, resolve the many challenges of incarceration. However, aligning routine correctional practices with what we know about restorative sleep is an achievable

[4] Harvard Medical School Division of Sleep Medicine, "Why Sleep Matters: Consequences of Sleep Deficiency," *Sleep and Health Education Program*, accessed December 10, 2025, https://sleep.hms.harvard.edu/education-training/public-education/sleep-and-health-education-program/sleep-health-education-45.
[5] Harvard Medical School Division of Sleep Medicine, "Why Sleep Matters."
[6] Johanna E. Elumn et al., "'What if That's Your Last Sleep?' A Qualitative Exploration of the Trauma of Incarceration and Sleep," *Sleep Advances* 5, no. 1 (2024): 1–2, https://doi.org/10.1093/sleepadvances/zpad055.

and meaningful step toward creating safer, more stable, and more humane facilities—for the people who live and work in them, and for the communities to which most incarcerated people will eventually return.

"When the state takes a person into custody for any reason, the Constitution imposes a duty to provide for the detainee's basic human needs. Conditions of confinement that deprive detainees of those needs...violate the Constitution."

— U.S. District Judge James Donato, Upshaw v. Alameda County

Source: Lloyd Payne, "Judge Rules Against Unnecessary Sleep Intrusions," *San Quentin News*, June 25, 2019, https://sanquentinnews.com/judge-rules-against-unnecessary-sleep-intrusions.

II. Methodology

This report is the product of a multi-year project of the Prison and Jail Innovation Lab at the Lyndon B. Johnson School of Public Affairs at The University of Texas at Austin. The project is part of PJIL's broader efforts to examine how routine conditions and operational practices within prisons and jails shape the experience of incarceration and how these practices can be improved to reduce harm and promote the safe and humane treatment of incarcerated people. Our research began in a graduate-level law and public policy course and continued through collaboration among PJIL's graduate student employees, formerly incarcerated people, corrections practitioners, and external experts.

From the outset, we recognized that sleep in custody cannot be meaningfully analyzed through academic research alone. To ensure our analysis reflected lived experience, we convened an advisory group of formerly incarcerated people from multiple states—a group we called "ADEPT (Advisors with Direct Experience Project Team)." ADEPT members provided examples from their personal experiences, identified gaps and blind spots in our research, and helped shape our analysis and recommendations.

To understand what sleep looks and feels like in custody, we reviewed first-person accounts from currently and formerly incarcerated people and corrections officials, including published essays, news articles, and letters shared with us by correctional oversight bodies, and communications we received from people in prisons and jails. Members of the research team also drew on observations from prior prison and jail visits, which informed our understanding of daily operational realities.

To ensure our recommendations could be translated into daily practice, we interviewed former corrections officials across multiple states with extensive experience managing facilities. These conversations focused on how daily operations impacted sleep, the constraints agencies face, and where reforms are possible. Their insight and advice helped ensure that our analysis and recommendations are grounded in the realities of prison and jail management and operation.

To understand the sleep process and how routine practices in prisons and jails can disrupt sleep, we conducted a literature review. We examined research from medicine, psychology, neuroscience, and public health to understand the science of sleep and the consequences of sleep disruption; legal scholarship and court decisions addressing sleep deprivation; national and international standards for operating and managing prisons and jails; corrections agencies' internal policies and training materials; and the reports of correctional oversight bodies. Where relevant, we also reviewed research on sleep in other institutional settings, including hospitals and long-term care facilities.

These methods allowed us to examine sleep in prisons and jails as it is experienced in practice. Grounding the analysis and recommendations in lived experience, sleep science, and the realities of operating prisons and jails helps ensure that the findings and recommendations are realistic, applicable across states and local jurisdictions, and responsive to the conditions within these facilities.

III. What is Restorative Sleep?

To understand how prison and jail operations disrupt sleep, we must first define restorative sleep and explain why it matters. Sleep is not inactivity or rest; it is an active biological process that affects nearly every system in the body. When sleep is sufficient and well timed, it supports physical health, cognitive function, and emotional regulation. When it is repeatedly disrupted or shortened, those same systems begin to deteriorate.

The goal of sleep is to allow the brain and body to recover from the demands of waking life. Over the course of the day, metabolic and neurological byproducts accumulate, increasing the need for sleep and making it easier to fall asleep. When sleep is uninterrupted, the body progresses through a coordinated series of stages that support tissue repair, immune function, hormonal regulation, memory consolidation, and emotional processing. This is what makes sleep "restorative": it resets the systems that allow people to think clearly, regulate stress, and function effectively the next day.

Both quantity and quality of sleep matter. While sleep duration often receives the most attention, restorative sleep depends equally on quality of sleep, characterized by minimal disruptions, to allow a person to progress through sleep cycles and achieve the deeper stages of sleep. In carceral settings, where environmental and operational disruptions are common, ensuring both quantity and quality of incarcerated people's sleep is critical.

Restorative sleep follows a predictable biological pattern, shaped by internal biological processes and by the conditions—internal or external—that can support or disrupt them.

Internal Biological Processes Necessary for Restorative Sleep

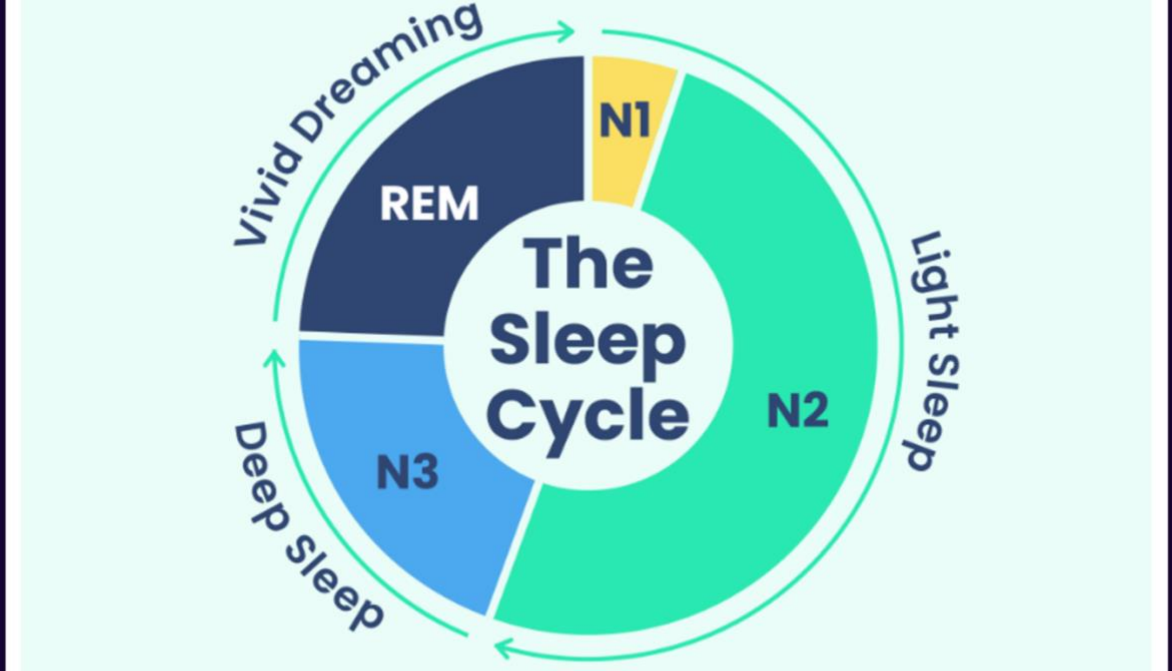
Sleep follows a biological pattern (the "sleep-wake cycle") governed by two interacting systems: 1) the circadian rhythm (commonly referred to as the "biological clock"), primarily regulated by external cues, such as light and darkness, and 2) the homeostatic sleep drive (referred to as the "biological need for sleep") that builds during waking hours.[7] When these systems are aligned, the need for sleep increases steadily throughout the day, making it progressively harder to stay alert and easier to fall asleep at night.[8]

A typical night of sleep unfolds in repeating cycles, each lasting approximately ninety minutes, with most adults completing four to six of these cycles, totaling seven to nine hours of sleep per

[7] Attila A. Borbély, "A Two-Process Model of Sleep Regulation," *Human Neurobiology* 1, no. 3 (1982): 196, https://pubmed.ncbi.nlm.nih.gov/7185792/.
[8] Institute of Medicine (US) Committee on Sleep Medicine and Research, *Sleep Disorders and Sleep Deprivation: An Unmet Public Health Problem*, ed. Harvey R. Colten and Bruce M. Altevogt (Washington, DC: National Academies Press, 2006), 55, https://doi.org/10.17226/11617.

night.[9] As **Figure 1** shows, each cycle includes several distinct stages—light sleep (stages N1 and N2), deep sleep (N3), and rapid eye movement (REM)—each serving a different function.[10] The benefits of sleep depend not only on entering these stages but also on progressing through them in sequence and with minimal interruption.[11] Interruptions at any point reset the sleep cycle and reduce time spent in deeper, more restorative stages.[12]

Figure 1: The Stages of Sleep in a Single Sleep Cycle



Source: Eric Suni, "What Happens When You Sleep?" Sleep Foundation, https://www.sleepfoundation.org/how-sleep-works/what-happens-when-you-sleep.

Sleep begins with the lighter stages—**N1** and **N2**—which together make up the largest portion of the sleep cycle.[13] In **N1**, the body transitions from wakefulness to sleep: breathing slows, muscles relax, and the brain begins disengaging from the external environment. In **N2**, heart rate

[9] Cleveland Clinic, "Sleep: How Much You Need and Its 4 Stages." *Health Essentials* (blog), December 10, 2025, https://health.clevelandclinic.org/your-complete-guide-to-sleep.
[10] Eric Suni, "What Happens When You Sleep: The Science of Sleep," *Sleep Foundation*, July 10, 2025, https://www.sleepfoundation.org/how-sleep-works/what-happens-when-you-sleep.
[11] Institute of Medicine, *Sleep Disorders and Sleep Deprivation*, 46.
[12] Eric Suni, "Stages of Sleep: What Happens in a Normal Sleep Cycle?" *Sleep Foundation*, July 25, 2025, https://www.sleepfoundation.org/stages-of-sleep.
[13] Suni, "What Happens When You Sleep?"

and body temperature continue to drop, and brain activity shifts to support memory processing and nervous system recovery. N2 also helps filter out environmental stimuli as the body prepares to enter deeper sleep.

But because these stages serve as a bridge to deeper, more restorative sleep, they remain especially vulnerable to interruption.[14] Light, noise, temperature instability, or sudden disturbances can pull the brain back toward wakefulness before it progresses further. And because these stages recur at the beginning of every sleep cycle—not just at bedtime—disruptions at any point in the night can repeatedly reset the process.[15] Over time, this prevents consistent access to the deeper, more restorative stages of sleep, which helps explain how someone can be in bed for six or seven hours and still wake up feeling profoundly sleep-deprived.

The deepest stage of sleep, **Stage N3**, is where much of the body's physical restoration occurs. During this stage, the body repairs tissues, strengthens the immune system, and supports growth and recovery.[16] N3 sleep is the hardest to interrupt, but when disrupted, people often experience pronounced grogginess and disorientation upon waking.[17] This stage typically occurs during periods of darkness, when melatonin levels are highest.[18]

Each cycle concludes with **rapid eye movement (REM) sleep**, which becomes longer in subsequent cycles during the night.[19] REM sleep—the best-known stage of sleep—is critical for brain function, including learning, memory consolidation, emotional regulation, and problem-solving.[20] When REM sleep is repeatedly interrupted or shortened, the brain is deprived of these essential processes, leading to impaired concentration, mood instability, and reduced cognitive flexibility. [21] If REM sleep is insufficient one night, the body attempts to compensate on subsequent nights—a process that becomes difficult when sleep disruption is chronic.[22]

Together, these stages form a coordinated system that enables the physical and mental restoration that our brain and body require. However, when this cycle is regularly disrupted—by environmental conditions, irregular schedules, or repeated nighttime interruptions—the body is prevented from completing these restorative processes, with predictable consequences for health, behavior, and daily functioning. The next section examines the conditions that enable or impede the sleep process.

[14] Suni, "Stages of Sleep."
[15] Institute of Medicine, *Sleep Disorders and Sleep Deprivation*, 45.
[16] Suni, "Stages of Sleep."
[17] Institute of Medicine, *Sleep Disorders and Sleep Deprivation*, 55.
[18] Institute of Medicine, *Sleep Disorders and Sleep Deprivation*, 56.
[19] Suni, "What Happens When You Sleep?"
[20] Institute of Medicine, *Sleep Disorders and Sleep Deprivation*, 56.
[21] Institute of Medicine, *Sleep Disorders and Sleep Deprivation*, 58–59.
[22] Joshua Feriante and Shantanu Singh, "REM Rebound Effect," in *StatPearls* (Treasure Island, FL: StatPearls Publishing, 2024), last modified September 12, 2024, https://www.ncbi.nlm.nih.gov/sites/books/NBK560713/.

Conditions Necessary for Restorative Sleep

While sleep is governed by circadian rhythms and the need for sleep that builds during the day, whether someone can move through the sleep cycles as intended depends on internal and external conditions. Restorative sleep does not occur automatically once our eyes are closed. Research consistently shows that both environmental factors and internal stimuli shape whether people can fall asleep, stay asleep, and progress through the restorative stages of sleep.[23]

a. External conditions that impact sleep

Several environmental conditions are necessary for someone to move through all four to six sleep cycles without interruption:

Light is among the most influential external cues affecting sleep. Exposure to light, particularly artificial light at night, suppresses melatonin secretion and signals the brain to remain alert, increasing sleep fragmentation and shortening total sleep time.[24] By contrast, darkness cues the secretion of melatonin, a hormone that supports sleep onset and continuity. Coupled with darkness at night, consistent exposure to natural light during the day is necessary to synchronize the sleep-wake cycle.[25]

Noise also disrupts sleep. Even sounds that do not fully awaken a person can trigger brief arousals that interrupt sleep cycles and keep them from entering the deeper stages of sleep. Chronic nighttime noise is associated with lighter sleep, increased awakenings, and reduced time spent in deep and REM sleep. Unpredictable or sudden sounds are especially disruptive, as they elicit anxiety and stress—emotions that keep the brain in a state of arousal.[26]

Temperature also plays a critical role in sleep regulation. Sleep onset is facilitated by a natural drop in core body temperature, and cooler ambient temperatures support this process. Environments that are too hot, too cold, or that fluctuate widely in temperature interfere with sleep initiation and increase nighttime awakenings. Poor temperature control has been consistently linked to reduced sleep quality and shorter sleep duration.[27]

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[23] Harvard Medical School Division of Sleep Medicine, "Science of Sleep: How Is Sleep Regulated?" *Sleep and Health Education Program*, accessed December 10, 2025, https://sleep.hms.harvard.edu/education-training/public-education/sleep-and-health-education-program/sleep-health-education-48.

[24] Charles A. Czeisler et al., "Bright Light Resets the Human Circadian Pacemaker Independent of the Timing of the Sleep-Wake Cycle," *Science* 233, no. 4764 (1986): 667, https://doi.org/10.1126/science.3726555; Institute of Medicine, *Sleep Disorders and Sleep Deprivation*, 54.

[25] Kenneth P. Wright Jr. et al., "Entrainment of the Human Circadian Clock to the Natural Light-Dark Cycle," *Current Biology* 23, no. 16 (2013): 1554, https://doi.org/10.1016/j.cub.2013.06.039.

[26] Demian Halperin, "Environmental Noise and Sleep Disturbances: A Threat to Health?" *Sleep Science* 7, no. 4 (2014): 210. https://doi.org/10.1016/j.slsci.2014.11.003.

[27] Kazue Okamoto-Mizuno and Koh Mizuno, "Effects of Thermal Environment on Sleep and Circadian Rhythm," *Journal of Physiological Anthropology* 31, no. 14 (2012): 6, https://doi.org/10.1186/1880-6805-31-14.

Daily routines and schedules also strongly influence sleep quality. Regular timing of meals, physical activity, and exposure to natural light reinforces circadian rhythms and helps the brain and body prepare for sleep at night. Conversely, irregular schedules, early-morning obligations, late-night activity, or prolonged inactivity can weaken circadian signals and impair sleep. Research on shift work and other forms of schedule misalignment shows that when daily routines conflict with the body's natural rhythms, sleep becomes shorter, lighter, and less restorative.[28]

Even in otherwise healthy people, misalignment of these conditions results in lighter and more fragmented sleep.

b. Internal conditions that interfere with restorative sleep

Sleep quality is also profoundly influenced by internal stimuli, including anxiety, fear, trauma-related responses, sleep disorders, and physical health conditions. These internal factors activate the sympathetic nervous system, increasing arousal precisely when the body needs to relax.[29]

Anxiety, fear, stress, and other trauma-related responses are among the most common internal barriers to sleep. Worry, hypervigilance, and rumination increase cognitive arousal, making it difficult for the brain to disengage from threat monitoring and problem-solving.[30] Elevated stress levels are associated with longer sleep latency, more frequent awakenings, and reduced time spent in deep and REM sleep. Even in safe environments, anxiety disorders and trauma-related responses—conditions that impact many incarcerated people—are strongly associated with chronic insomnia and non-restorative sleep.[31]

Sleep apnea and other sleep disorders represent another significant internal barrier to restorative sleep. Sleep apnea—a condition characterized by repeated pauses in breathing during sleep—is especially disruptive, fragmenting sleep cycles and reducing time spent in deep and REM sleep even when total sleep duration appears adequate.[32] Because awakenings caused by sleep apnea are often brief and unconscious, individuals may be unaware that their sleep is repeatedly interrupted.[33]

Other sleep disorders, including insomnia, similarly interfere with the body's ability to initiate or

[28] Till Roenneberg et al., "Social Jetlag and Obesity," *Current Biology* 22, no. 10 (2012): 939. https://doi.org/10.1016/j.cub.2012.03.038.
[29] Elumn et al., "'What if That's Your Last Sleep?'" 4.
[30] Anne Germain, "Sleep Disturbances as the Hallmark of PTSD: Where Are We Now?" *American Journal of Psychiatry* 170, no. 4 (2013): 374, https://doi.org/10.1176/appi.ajp.2012.12040432.
[31] Daniel J. Buysse, "Insomnia," *Journal of the American Medical Association* 309, no. 7 (2013): 708, https://doi.org/10.1001/jama.2013.193.
[32] Paul E. Peppard et al., "Increased Prevalence of Sleep-Disordered Breathing in Adults," *American Journal of Epidemiology* 177, no. 9 (2013): 1006, https://doi.org/10.1093/aje/kws342.
[33] Terry Young et al., "The Occurrence of Sleep-Disordered Breathing Among Middle-Aged Adults," *New England Journal of Medicine* 328, no. 17 (1993): 1230, https://doi.org/10.1056/NEJM199304293281704.

maintain sleep and to progress through the full stages necessary for restoration.[34] Many sleep disorders are highly treatable when properly identified and treated, but many correctional healthcare systems lack the resources needed to mitigate their symptoms.[35]

Physical health conditions also interfere with sleep quality. Chronic pain increases nighttime awakenings and reduces sleep efficiency, while sleep loss, in turn, slows immune function and exacerbates pain. Moreover, many chronic health conditions—including respiratory disorders, cardiovascular disease, and metabolic conditions—are associated with sleep disruption.[36]

Many incarcerated people enter prison and jail with mental health challenges, chronic medical conditions, and have experienced trauma over the course of their lifetime.[37] These internal factors alone place incarcerated people at elevated risk for sleep disturbances. When combined with external conditions known to disrupt sleep, the likelihood of achieving restorative sleep further diminishes.

[34] Buysse, "Insomnia," 707.
[35] Elumn et al., "'What if That's Your Last Sleep?'" 5.
[36] Michael T. Smith and Jennifer A. Haythornthwaite, "How Do Sleep Disturbance and Chronic Pain Interrelate? Insights from the Longitudinal and Cognitive-Behavioral Clinical Trials Literature," *Sleep Medicine Reviews* 8, no. 2 (2004): 119, https://doi.org/10.1016/S1087-0792(03)00044-3.
[37] Nazish Dholakia, "Mass Incarceration is a Public Health Crisis," Vera Institute of Justice, June 17, 2025, https://www.vera.org/news/mass-incarceration-is-a-public-health-crisis.

IV. Health Consequences of Impaired Sleep

Restorative sleep supports physical health, cognitive functioning, and emotional regulation. Impaired sleep undermines these same systems. Sleep loss—whether caused by insufficient duration, repeated interruptions, or chronic circadian misalignment—has well-documented consequences for health and behavior.[38] Many of these effects are bidirectional, meaning sleep disruption can exacerbate existing physical or mental health conditions, for example, while those same conditions can impair sleep.[39]

Impaired sleep affects everyone, but incarcerated people face a heightened risk of the resulting health challenges. This increased vulnerability reflects the fact that many people enter prison or jail with preexisting conditions such as physical and mental health challenges, substance use disorders, and impaired cognitive, emotional, and social functioning.[40] Limited access to timely and preventive health care in prison and jail can further exacerbate symptoms.

Physical Health

Sleep is central to maintaining nearly every major physiological system in the body. As Figure 2 shows, chronic sleep loss is associated with high blood pressure, heart disease, stroke, diabetes, obesity, and a weakened immune response.[41] These risks are especially consequential in prisons and jails, where people are more likely to enter custody with pre-existing health conditions and less likely to receive consistent medical care. According to the U.S. Bureau of Justice Statistics, more than half of incarcerated people report at least one chronic medical condition, including asthma, hypertension, hepatitis, or infectious disease.[42]

Poor sleep can worsen symptoms of these conditions, slow recovery, and increase vulnerability to new illnesses. At the same time, unmanaged medical conditions—such as chronic pain, respiratory disorders, gastrointestinal problems, or neurological conditions—can further disrupt sleep, creating a cycle of declining health.[43]

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[38] Eric Suni, "Interrupted Sleep: Causes & Helpful Tips," *Sleep Foundation*, July 29, 2025, https://www.sleepfoundation.org/sleep-deprivation/interrupted-sleep.

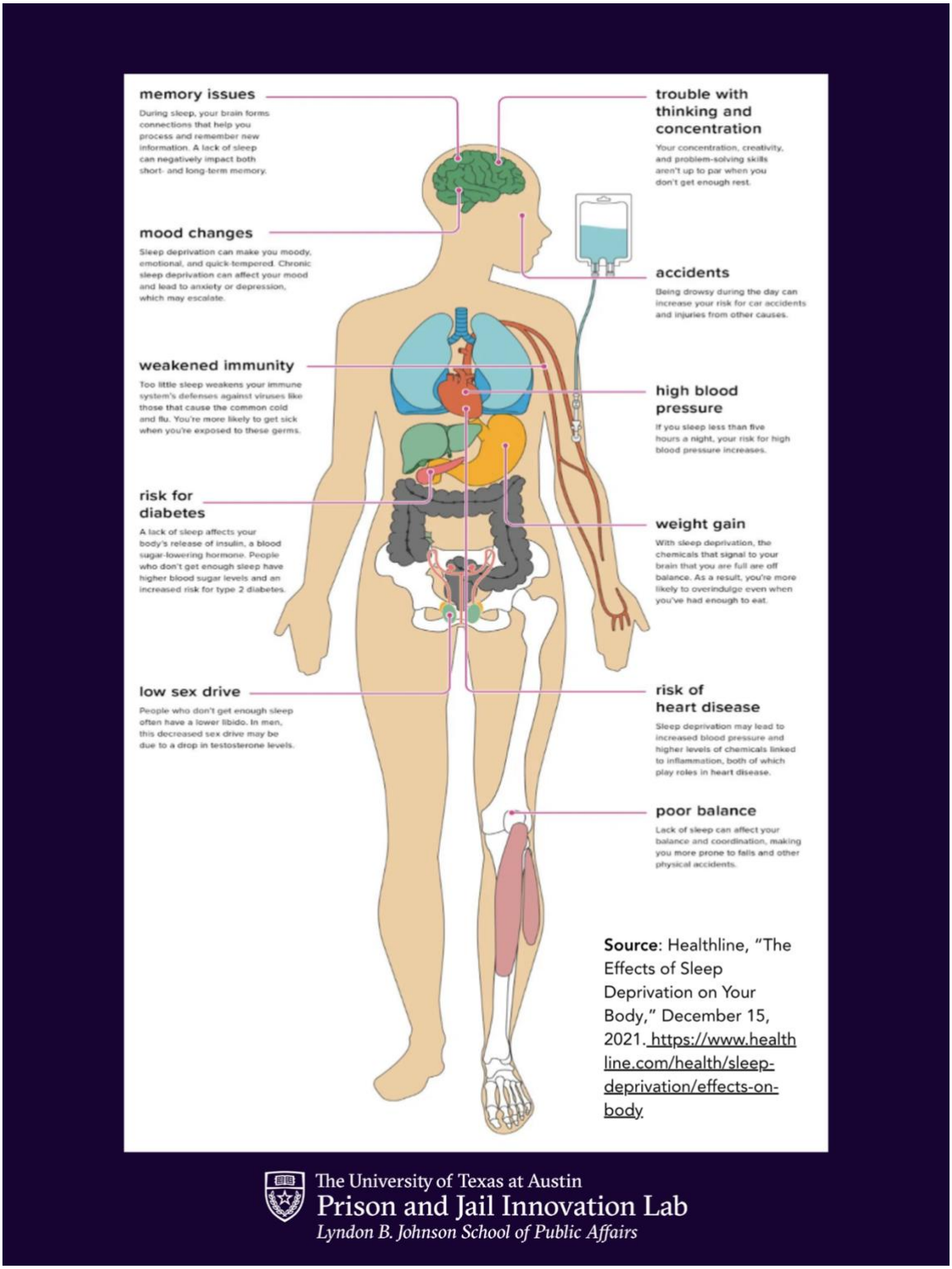
[39] Siobhan Banks and David F. Dinges, "Behavioral and Physiological Consequences of Sleep Restriction," *Journal of Clinical Sleep Medicine* 3, no. 5 (2007): 522, https://doi.org/10.5664/JCSM.26918.

[40] Laura M. Maruschak and Marcus Berzofsky, *Medical Problems of State and Federal Prisoners and Jail Inmates, 2011–12* (Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, 2015), 1, https://bjs.ojp.gov/content/pub/pdf/mpsfpji1112.pdf.

[41] Institute of Medicine, *Sleep Disorders and Sleep Deprivation*, 55.

[42] Maruschak and Berzofsky, "Medical Problems of State and Federal Prisoners and Jail Inmates, 2011–12," 1.

[43] Patrick H. Finan, Burel A. Goodin, and Michael T. Smith, "The Association of Sleep and Pain: An Update and a Path Forward," *Sleep Medicine Reviews* 14, no. (2013): 1540, https://doi.org/10.1016/j.jpain.2013.08.007.



Source: Healthline, "The Effects of Sleep Deprivation on Your Body," December 15, 2021, https://www.healthline.com/health/sleep-deprivation/effects-on-body.

Sleep loss is also closely linked to metabolic dysfunction. Insufficient sleep alters appetite regulation, increases energy intake, and impairs glucose metabolism, raising the risk of weight

gain, obesity, and related conditions.[44] The body's ability to regulate metabolism and balance hormones can begin to break down after just one week of impaired sleep. [45] Given the constrained diets and limited opportunities for physical activity in prison, sleep disruption compounds already elevated health risks.

"I have experienced medical problems from the lack of sleep, including sleep deprivation,...headaches, dizziness, and sudden fainting, an increased heart rate, blurred vision, excessive hunger, changes in weight, body cramps, irritability, anxiety, mood swings, memory loss, and inability to concentrate."

— Christopher Lipsey Jr., incarcerated at Corcoran State Prison (California)

Source: Sam Stanton, "Update: California Inmate's Suit Says Noise Made by Device During Checks Keeping Him Awake," *Sacramento Bee*, February 20, 2020, https://www.sacbee.com/news/california/article240396741.html.

Additionally, sleep is critical to immune functioning. Insufficient or fragmented sleep suppresses immune responses, increases susceptibility to infection, and slows recovery from illness or injury.[46] In congregate living environments like prisons and jails, where the risk of viral exposure is already elevated, impaired sleep further undermines health resilience and makes it harder to control the spread of airborne viruses.

Mental Health Challenges and Substance Use Disorders (SUDs)

The relationship between sleep and mental health is particularly strong. Insufficient sleep is associated with depression, anxiety disorders, post-traumatic stress disorder (PTSD), bipolar disorder, and suicidality.[47] At the same time, symptoms of these conditions—such as rumination, hypervigilance, nightmares, or emotional distress—further interfere with sleep.[48] The relationship between sleep and symptoms of mental health challenges is especially relevant in prisons and jails, where these symptoms are prevalent but access to treatment is limited.[49]

[44] Karine Spiegel, Rachel Leproult, and Eve Van Cauter, "Impact of Sleep Debt on Metabolic and Endocrine Function," *The Lancet* 354, no. 9188 (1999): 1438, https://doi.org/10.1016/S0140-6736(99)01376-8.
[45] Charlotte S. Möller-Levet et al., "Effects of Insufficient Sleep on Circadian Rhythmicity and Expression Amplitude of the Human Blood Transcriptome," *Proceedings of the National Academy of Sciences (PNAS)* 110, no. 12 (2013): E1132, https://doi.org/10.1073/pnas.1217154110.
[46] Alison Caldwell, "Not Getting Enough Sleep Could Blunt Antibody Response to Vaccination, Leaving You More Vulnerable to Infection," *At the Forefront*, University of Chicago Medicine, March 13, 2023, https://www.uchicagomedicine.org/forefront/research-and-discoveries-articles/not-getting-enough-sleep-could-blunt-antibody-response-to-vaccination-leaving-you-more-vulnerable-to-infection.
[47] Chiara Baglioni et al., "Sleep and Mental Disorders: A Meta-Analysis of Polysomnographic Research," *Psychological Bulletin* 142, no. 9 (2016): 969, https://doi.org/10.1037/bul0000053.
[48] Daniel Freeman et al., "Sleep Disturbance and Psychiatric Disorders," *The Lancet Psychiatry* 7, no. 7 (2020): 629, https://doi.org/10.1016/S2215-0366(20)30136-X.
[49] National Alliance on Mental Illness, "Mental Health Treatment While Incarcerated." Accessed November 8, 2025, https://www.nami.org/advocacy-at-nami/policy-positions/improving-health/mental-health-treatment-while-incarcerated/.

Sleep disruption is also closely tied to substance use disorders (SUDs), which affect an estimated two-thirds of the incarcerated population.[50] Chronic substance use alters sleep architecture, reducing total sleep time, increasing nighttime awakenings, and suppressing REM sleep.[51] Sleep problems can even persist during periods of abstinence, including incarceration.[52] Conversely, sleep disturbance itself increases the risk of substance use initiation and relapse, making impaired sleep both a consequence and a contributor to SUDs.[53]

Cognitive, Emotional, and Social Functioning

Sleep is foundational to executive functioning—the neurological system that governs attention, judgment, impulse control, and emotional regulation.[54] Sleep loss heightens emotional reactivity while simultaneously reducing the brain's ability to modulate responses to stress.[55] People who experience chronic sleep loss feel more negative emotions, fewer positive emotions, and have a diminished tolerance for frustration.[56] They are also more likely to act impulsively, misinterpret social cues, and struggle to anticipate consequences.

It should come as no surprise, then, that poor sleep is also strongly associated with aggression and conflict. Research links sleep disruption to higher levels of reactive aggression and lower levels of prosocial behavior.[57] It also makes people more likely to misinterpret social cues, perceive neutral interactions as hostile, and respond defensively.[58] At the same time, sleep loss reduces empathy, making cooperation and de-escalation less likely.[59] In congregate environments such as prisons and jails, where tensions may already run high, these effects can escalate minor disagreements into serious conflicts, increasing disciplinary incidents and undermining institutional safety.

Sleep impairment also increases the risk of accidents and injuries by reducing alertness, slowing

[50] National Institute on Drug Abuse, "Criminal Justice DrugFacts," *DrugFacts,* last modified June 2023, https://nida.nih.gov/publications/drugfacts/criminal-justice.
[51] Brant P. Hasler et al., "Circadian Rhythms, Sleep, and Substance Use Disorders," *Sleep Medicine Reviews* 16, no. 1 (2012): 68, https://doi.org/10.1016/j.smrv.2011.03.004.
[52] Hasler et al., "Circadian Rhythms," 68.
[53] Hasler et al., "Circadian Rhythms," 67.
[54] William D. S. Killgore, "Effects of Sleep Deprivation on Cognition," *Progress in Brain Research*, vol. 185 (2010): 113, https://doi.org/10.1016/B978-0-444-53702-7.00007-5.
[55] Killgore, "Effects of Sleep Deprivation," 114.
[56] Cara C. Tomaso, Anna B. Johnson, and Timothy D. Nelson, "The Effects of Sleep Deprivation and Restriction on Mood, Emotion, and Emotion Regulation: Three Meta-Analyses in One," *Sleep* 44, no. 6 (2021): 1, https://doi.org/10.1093/sleep/zsaa289.
[57] Jan Kamphuis et al., "Poor Sleep as a Potential Causal Factor in Aggression and Violence," *Sleep Medicine* 13, no. 4 (2012): 328, https://doi.org/10.1016/j.sleep.2011.12.006.
[58] Marie Vandekerckhove and Yu-Lin Wang, "Emotion, Emotion Regulation and Sleep: An Intimate Relationship," *AIMS Neuroscience* 5, no. 1 (2018): 4, https://doi.org/10.3934/Neuroscience.2018.1.1.
[59] Vandekerckhove and Wang, "Emotion, Emotion Regulation and Sleep, " 11.

reaction time, and impairing judgment.[60] In facilities where staff already manage strained health systems, preventable injuries add an additional burden to daily operations.

"There are days when I can barely stay awake during the daytime...I cannot problem solve. I can't remember things people have told me."

— Tikisha Upshaw, lead plaintiff, Upshaw v. Alameda County

Source: Lloyd Payne, "Judge Rules Against Unnecessary Sleep Intrusions," *San Quentin News*, June 25, 2019, https://sanquentinnews.com/judge-rules-against-unnecessary-sleep-intrusions.

Sleep is also essential for learning, memory consolidation, and behavior change. During sleep, the brain strengthens and integrates information acquired during waking hours. When sleep is disrupted, the ability to retain new information, acquire skills, and benefit from educational, vocational, or therapeutic programming significantly diminishes.[61] As a result, chronic sleep loss undermines rehabilitative efforts and reduces the effectiveness of programs designed to promote long-term behavioral change.

Populations Facing Heightened Risk

Certain groups within the incarcerated population face even greater vulnerability to the consequences of impaired sleep. The population is aging, and older adults are more likely to experience sleep difficulties related to chronic illness, pain, medication use, and age-related changes in sleep architecture.[62] Prisons and jails are poorly suited to accommodate these needs, likely exacerbating the effects of age-related sleep problems.

Women also face distinct sleep-related challenges during incarceration. Women in prison report higher rates of mental health conditions, trauma exposure, and substance use disorders than men.[63] Many experience reproductive health transitions, including pregnancy and menopause, which are associated with sleep disruption, fatigue, night sweats, mood changes, and insomnia.[64] The inability to control temperature, access appropriate health care, or manage symptoms through routine adjustments further compounds these challenges and exacerbates the consequences of impaired sleep.

[60] David F. Dinges et al., "Cumulative Sleepiness, Mood Disturbance, and Psychomotor Vigilance Performance Decrements During a Week of Sleep Restricted to 4-5 Hours per Night," *Sleep* 20, no. 4 (1997): 271, https://doi.org/10.1093/sleep/20.4.267.
[61] Jan Born and Ines Wilhelm, "System Consolidation of Memory During Sleep," *Psychological Research* 76, (2011): 192, https://doi.org/10.1007/s00426-011-0335-6.
[62] Daniel J. Foley et al., "Sleep Complaints Among Elderly Persons: An Epidemiologic Study of Three Communities," *Sleep* 18, no. 6 (1995): 426, https://doi.org/10.1093/sleep/18.6.425.
[63] Laura Maruschak and Jennifer Bronson, *Indicators of Mental Health Problems Reported by Prisoners* (Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, 2016), 2, https://bjs.ojp.gov/media/44841/download.
[64] Fiona C. Baker et al., "Sleep and Sleep Disorders in the Menopause Transition," *Sleep Medicine Clinics* 13, no. 3 (2018): 443, https://doi.org/10.1016/j.jsmc.2018.04.011.

V. What Does Sleep Look Like in Prisons and Jails?

For many people incarcerated in prisons and jails, nighttime does not bring sustained rest. Sleep unfolds in short intervals shaped by frequent interruptions, schedules that are misaligned with normal circadian rhythms, and a physical environment that makes it difficult for the body to settle. Incarcerated people describe nights marked by inadequate mattresses and bedding, harsh lighting, constant noise, unregulated temperature, fear, and anxiety, followed by days that offer little meaningful activity, leaving the body poorly prepared for restorative sleep at night. These practices are not accidental. They are shaped by institutional routines, rather than by what is known about restorative sleep.

Daily schedules are one of the most significant ways prison life diverges from the body's natural sleep–wake cycle. In Texas state prisons, for example, sleep is often compressed into short windows dictated by institutional routines rather than what is needed for restorative sleep. In several facilities, incarcerated people report a nightly schedule in which lights go out around 10:30 p.m., and they are awakened for counts at 1:00 a.m, when they are required to verbally identify themselves to staff.[65] At 2:00 a.m., they are called for breakfast and medication lines.[66] Even under ideal conditions, this leaves just a few hours for sleep, but in practice, those hours are fractured by additional disruptions such as hallway lighting, slamming metal doors, and noise caused by staff and other incarcerated people.[67] The result is a pattern of broken sleep that prevents the body from reaching deeper, restorative stages of rest.

Similar patterns appear in other jurisdictions. At a Georgia prison, incarcerated people describe frequent middle-of-the-night emergency counts at 3:00 a.m. or 4:00 a.m.[68] Some cope by skipping breakfast altogether, weighing hunger against the slim chance of returning to sleep after such disruptions.[69] These accounts underscore how institutional schedules routinely force people to choose between basic needs, rather than allowing sleep to function as a stable biological process.

In secure housing units—spaces reserved for people deemed violent or living with serious mental health challenges—sleep disruption can be even more severe. In these units, staff frequently conduct welfare checks every thirty minutes to reduce suicide attempts and completions.[70] While welfare checks are intended as a safety measure, the cumulative effect of these repeated checks is relentless fragmentation of sleep, particularly for people already experiencing acute

[65] Michelle Pitcher, "Some Texas Prisoners Allowed Only Four Hours of Sleep a Night, Lawsuit Says," *Texas Observer*, April 2, 2024, https://www.texasobserver.org/criminal-justice-prison-sleep-tdcj-sleep-deprivation-lawsuit/.
[66] Pitcher, "Some Texas Prisoners."
[67] Pitcher, "Some Texas Prisoners."
[68] Shannon Heffernan and Keri Blakinger, "'Sleep Don't Come': The Dangerous Problem of Sleep Deprivation Behind Bars," *The Marshall Project*, December 12, 2024, https://www.themarshallproject.org/2024/12/12/sleep-don-t-come-the-dangerous-problem-of-sleep-deprivation-behind-bars.
[69] Heffernan and Blakinger, "'Sleep Don't Come.'"
[70] Sam Stanton, "Update: California Inmate's Suit Says Noise Made by Device During Checks Keeping Him Awake," *Sacramento Bee*, February 20, 2020, https://www.sacbee.com/news/california/article240396741.html.

psychological distress. Rather than creating conditions that support sleep health, the constant interruption can intensify insomnia, anxiety, and emotional dysregulation.

> "Quite simply, that a custom of leaving inmates nowhere to sleep but the floor constitutes cruel and unusual punishment is nothing short of self-evident."
>
> **— U.S. District Judge Dean D. Pregerson, Thomas v. Baca**

Source: Shannon Heffernan and Keri Blakinger, "'Sleep Don't Come': The Dangerous Problem of Sleep Deprivation Behind Bars," *The Marshall Project*, December 12, 2024, https://www.themarshallproject.org/2024/12/12/sleep-don-t-come-the-dangerous-problem-of-sleep-deprivation-behind-bars.

The physical conditions of confinement further undermine sleep. Inadequate mattresses and bedding—or in some cases, a lack thereof—also disrupt sleep. In the Los Angeles County Jail, people in custody have long reported sleeping without adequate bedding and, at times, without a bed at all. Despite a federal district court ruling that corrections agencies may not deprive those in their care of a basic place to sleep—a bed—local oversight inspections in 2024 documented moldy, torn mattresses, missing sheets and pillows, and continued reports of people sleeping on floors due to overcrowding.[71] Later, at a follow-up inspection, many of these conditions persisted.[72] When the most basic material requirements for sleep are absent, restorative rest becomes out of reach.

Harsh lighting compounds these challenges. In many housing units, especially secure housing units or administrative segregation, incarcerated people report that lights never fully turn off. Incarcerated people held in solitary confinement in one Pennsylvania prison describe the lights staying on around the clock, creating the sensation that it is "always daytime" and leaving the body without the darkness needed to signal sleep.[73] Legal filings in that state document how constant illumination interferes with sleep and exacerbates psychological distress, especially for those held in isolation.[74] Even in units that do turn off lights, it is never completely dark, and wakeup calls are accompanied by the blast of harsh fluorescent lights. For example, at a prison in Virginia, incarcerated people report "oppressively bright" cell lights that shine through

[71] Heffernan and Blakinger, "'Sleep Don't Come.'"
[72] Heffernan and Blakinger, "'Sleep Don't Come.'"
[73] Heffernan and Blakinger, "'Sleep Don't Come.'"
[74] Associated Press, "Pennsylvania Inmates Sue Over 'Torturous Conditions' of Solitary Confinement at SCI Fayette," *CBS News Pittsburgh*, October 3, 2023, https://www.cbsnews.com/pittsburgh/news/pennsylvania-inmates-sue-conditions-solitary-confinement-sci-fayette/.

improvised sleep masks that remain on for most of the day and night.[75] Without sufficient darkness, the brain struggles to transition into sleep, keeping the body in a state closer to wakefulness than rest. Attempts to block light—such as covering fixtures or windows—have, in some facilities, resulted in disciplinary infractions, forcing people to choose between following rules and protecting their ability to sleep.[76]

"It feels like your body can never rest. Like it's always daytime. So when you try to go to sleep, sleep don't come."

— John Thompson, incarcerated at a Pennsylvania prison

Source: Shannon Heffernan and Keri Blakinger, "'Sleep Don't Come': The Dangerous Problem of Sleep Deprivation Behind Bars," *The Marshall Project*, December 12, 2024, https://www.themarshallproject.org/2024/12/12/sleep-don-t-come-the-dangerous-problem-of-sleep-deprivation-behind-bars.

Noise compounds these disruptions. Throughout the night, incarcerated people describe staff's keys jangling, their boots striking concrete floors, metal doors slamming, their radios crackling, and voices calling out during counts and welfare checks. At a California prison, for example, incarcerated people reported staff waking them as often as every half hour by the sound of a time clock beside each cell being punched during their rounds.[77] In Virginia, incarcerated people report that bright lights are paired with piercing announcements over public address systems and staff shouting and blowing a high-pitched whistle during the wakeup call—sounds that provoke immediate pain, anxiety, and stress.[78]

Temperature adds another layer of disruption. In southern states and states on the West Coast, incarcerated people describe trying to sleep through extreme heat, sweating through the night in poorly ventilated cells.[79] In colder climates, incarcerated people recount winter nights spent shivering in inadequately heated housing units, sometimes with thin blankets and limited clothing.[80] In both climates, incarcerated people have reported lying awake not because of noise or light, but because their bodies could not relax enough to fall asleep. Temperature extremes

[75] David Annarelli, "The Constant Light and Sound of Prison Life Is Unbearable," *Prison Journalism Project*, August 17, 2023, https://prisonjournalismproject.org/2023/08/17/violent-impact-of-light-sound-prison/.
[76] Lloyd Payne, "Judge Rules Against Unnecessary Sleep Intrusions," *San Quentin News*, June 25, 2019, https://sanquentinnews.com/judge-rules-against-unnecessary-sleep-intrusions/#.
[77] Associated Press, "'Keep It Down': Inmates Ask California Prison Guards to Be Quieter at Night," *CBS News Sacramento*, September 17, 2015, https://www.cbsnews.com/sacramento/news/keep-it-down-inmates-ask-california-prison-guards-to-be-quieter-at-night/.
[78] Annarelli, "Constant Light and Sound."
[79] Jeanne Kuang, "California Prison System Beginning $38M Pilot Project to Test Ways to Keep Cells Cooler at 3 Prisons," *Associated Press*, September 4, 2025, https://apnews.com/article/general-news-prisons-california-c216bfe89dd5952abead2031f8b3456d.
[80] Joseph Darius Jafaari, "Dauphin County Prisoners Say Their Cells Are So Cold They Can See Their Breath," *WITF*, November 12, 2019, https://www.witf.org/2019/11/12/dauphin-county-prisoners-say-their-cells-are-so-cold-they-can-see-their-breath/.

prevent the physiological settling required for sleep, turning rest into a nightly struggle against the environment.

Sleep is also shaped by fear and vigilance. For many incarcerated people, nighttime heightens anxiety rather than easing it. Concerns about violence, theft, retaliation, or unpredictable staff actions keep the nervous system on alert long after lights dim. In a women's facility, for example, more than 70% of study participants were classified as poor sleepers, with racing thoughts, worry, and persistent mental activity cited as key contributors.[81] A look at Alabama state prisons helps understand another source of incarcerated people's ongoing fear and anxiety: the threat of violence from staff and other incarcerated people. In 2018, the Alabama Department of Corrections reported more than 280 assaults between incarcerated people, while 12 assaults between incarcerated people and staff resulted in serious injury; nearly 40 incarcerated people attempted suicide.[82] When fear and uncertainty dominate the night, the body remains in a state incompatible with deep, restorative sleep.

Cellmate dynamics further intensify this vigilance. In crowded facilities, people often share small cells with strangers, improvising privacy with bedsheets hung between a bed and a toilet. Incarcerated people describe constant low-level tension—over noise, lights, personal habits, and perceived threats—combined with the knowledge that help may not arrive quickly if conflict escalates. As one incarcerated man at a California prison explained, not knowing who you are housed with or what they are capable of creates a persistent fear of violence while sleeping.[83] When vigilance becomes a survival strategy, sleep becomes shallow, fragmented, or elusive altogether.

"You don't necessarily know what the capacity of this person is, or like what their crime is. You're not told any of that when you're put in a cell with them. I don't know if this person has the propensity to murder me in my sleep or commit a violent act against me just because they're feeling some type of way."

— Steven Warren, incarcerated at San Quentin Rehabilitation Center (California)

Source: Joe Garcia, "Some Say California Prisons Should Have More Single-Cell Units," *Los Angeles Times*, December 6, 2025, https://www.latimes.com/california/story/2025-12-06/some-say-california-prisons-should-have-more-single-cell-units.

[81] Holly M. Harner and Mia Budescu, "Sleep Quality and Risk for Sleep Apnea in Incarcerated Women," *Nursing Research* 63, no. 3 (2014): 163, https://doi.org/10.1097/NNR.0000000000000031.

[82] Brian Lyman, Andrew J. Yawn, and Melissa Brown, "DOJ Rips Alabama in Graphic Report for 'Failing to Protect' Prisoners," *Montgomery Advertiser*, April 3, 2019, https://www.montgomeryadvertiser.com/story/news/2019/04/03/doj-alabama-prison-conditions-could-unconstitutional/3351183002.

[83] Joe Garcia, "Some Say California Prisons Should Have More Single-Cell Units," *Los Angeles Times*, December 6, 2025, https://www.latimes.com/california/story/2025-12-06/some-say-california-prisons-should-have-more-single-cell-units.

Daytime conditions often reinforce these problems rather than counteract them. Limited access to meaningful activity, frequent lockdowns, and long hours of confinement leave many people sedentary and under-stimulated. Poor nighttime sleep leads to daytime fatigue and intermittent napping, which, in turn, weakens sleep pressure and further disrupts nighttime sleep. People describe a cycle in which neither day nor night offers genuine restoration. When days are marked by inactivity and nights by disruption, sleep loss becomes a self-reinforcing cycle.

Together, these accounts depict a sleep environment defined not by occasional disturbance, but by routine instability. Nights behind bars are structured in ways that fragment sleep and undermine the conditions necessary for restoration. Understanding what sleep looks like and feels like in prisons and jails clarifies why sleep impairment is so widespread, and why addressing it requires attention to the everyday routines and conditions that govern life behind bars.

The next section examines the structural and operational factors that produce these conditions and explains why poor sleep in prison is not incidental, but predictable.

VI. What Factors Affect Sleep in Prisons and Jails?

Sleep disruptions in prisons and jails are not incidental. They result from the combined effects of physical conditions, daily operations, and daytime routines that systematically undermine the biological processes that lead to restorative sleep.

There are three interrelated domains that prevent incarcerated people from obtaining restorative sleep:

1. Inadequate sleeping conditions;
2. Operations that are misaligned with circadian rhythms;
3. Daytime routines that undermine nighttime sleep.

Each operates independently, but together they embed chronic sleep disruption into the daily life of prisons and jails.

1. Inadequate sleeping conditions

Restorative sleep depends on whether the physical environment allows sleep to unfold without repeated interruption. Environmental conditions that support restorative sleep include a supportive mattress and bedding that reduce pressure and strain on the body; a stable, cool temperature that allows the body's core temperature to drop overnight; adequate personal space; and a sense of safety that allows the nervous system to relax.[84]

In prisons, however, sleeping environments undermine these requirements, keeping the body in a state of discomfort or vigilance that interferes with sleep initiation and maintenance. Sleep becomes lighter, more fragmented, and less restorative, even when the total time someone spends in bed appears sufficient.

a. Poor-quality mattresses and bedding

Supportive mattresses and bedding play a central role in sleep quality. Research on sleep health shows that people sleep more deeply and wake less often when their mattress supports the body and keeps the spine aligned.[85] These conditions reduce tossing and turning and allow the brain to remain in the deeper stages of sleep that support physical recovery, memory, and emotional regulation.[86] Public health guidance likewise emphasizes that adults need sleeping surfaces that

[84] Jessica Solodar, "Sleep Hygiene: Simple Practices for Better Rest," *Harvard Health Publishing*, January 31, 2025, https://www.health.harvard.edu/staying-healthy/sleep-hygiene-simple-practices-for-better-rest.
[85] Marjorie Hecht, Courtney Leiva, and Corey Whelan, "Does a Good Mattress Lead to Better Sleep?" *Healthline*, February 19, 2021, https://www.healthline.com/health/healthy-sleep/does-a-good-mattress-improve-sleep.
[86] Hecht, Leiva, and Whelan, "Does a Good Mattress Lead to Better Sleep?"

fit their bodies and retain support over time; worn-down or unsanitary mattresses are linked to poorer sleep and increased pain.[87]

In many prisons and jails, however, incarcerated people sleep on thin foam pads placed on steel or concrete bunks; in newer facilities, plastic structures may have replaced steel.[88] These pads compress quickly, provide little cushioning, and often lose what minimal support they have within months. For example, researchers studying sleep among incarcerated people at a facility in New Hampshire and another in Vermont found mattresses that are, on average, no more than five inches thick when new, but compress with use and have a hard plastic casing to prevent tampering.[89] Similarly, during a 2020 monitoring visit, the Washington Office of the Corrections Ombuds (OCO) found that the mattresses in one of the state's prisons had lost about half of their original thickness within 4-6 months.[90]

Source: Washington State Office of the Corrections Ombuds, Systemic Issue Report (Olympia, WA: Office of the Corrections Ombuds, July 27, 2020), 3 (left), 8 (right), https://oco.wa.gov/sites/default/files/public/Mattress%20Report%20Final.pdf.

Prison mattress manufacturers openly prioritize designing products that are tamper-resistant over physically supportive to prevent incarcerated people from hiding contraband inside.[91] These mattresses are typically no thicker than 5 inches and filled with fiber padding and foam encased in a blue plastic shell made of vinyl or PVC—the same material used for shower curtains.[92] This design creates a compression effect that leaves incarcerated people feeling as though they are sleeping directly on the metal bunk, which exacerbates back, joint, and muscle pain.[93] Across the country, incarcerated people routinely describe waking with back and joint pain, shifting

[87] Bert H. Jacobson, Ali Boolani, and Doug B. Smith, "Changes in Back Pain, Sleep Quality, and Perceived Stress After Introduction of New Bedding Systems," *Journal of Chiropractic Medicine* 8, no.1 (2009): 3, https://doi.org/10.1016/j.jcm.2008.09.002.
[88] John Fabricius, "Remarks at the ADEPT Panel Discussion," (LBJ School of Public Affairs, 2022).
[89] Adam J. Sorscher, William Crockatt, and Danielle Glinka Johnston, "A Study of Sleep in Northern New England Correctional Facilities," *Sleep Health* 11, no. 6 (2025): 837, https://doi.org/10.1016/j.sleh.2025.09.003.
[90] Washington State Office of the Corrections Ombuds, *Systemic Issue Report* (Olympia, WA: Office of the Corrections Ombuds, July 27, 2020), 3, https://oco.wa.gov/sites/default/files/public/Mattress%20Report%20Final.pdf.
[91] Ed Perratore, "Doing Hard Time on Your Mattress?" *Consumer Reports*, January 14, 2016, https://www.consumerreports.org/mattresses/doing-hard-time-on-your-mattress/.
[92] Perratore, "Doing Hard Time on Your Mattress?"
[93] Washington State Office of the Corrections Ombuds, "Systemic Issue Report," 2.

positions throughout the night to relieve discomfort, and sleeping lightly to avoid rolling off narrow bunks.[94] Each of these interruptions makes it difficult, if not impossible, for incarcerated people to reach the deeper, restorative stages of sleep.

> "'These cells aren't suited for tall people,' said Paul Reid, who is 6-foot-4 inches. The bed is too small for him. He sleeps on the floor diagonally so he can stretch his legs all the way out. 'I haven't had a comfortable night's sleep in 24 years,' Reid said. The thin mattress sits atop a metal frame with a wire-mesh platform. It takes up 13 1/2 square feet—nearly half of the cell's floor space."
>
> **— Shakeil Price, incarcerated at a New Jersey prison**
>
> **Source:** Shakeil Price, "The Cells Inside 'One of the Most Archaic Prisons in the United States,'" *Prison Journalism Project*, March 18, 2026, https://prisonjournalismproject.org/2026/03/18/small-prison-cells.

Bedding quality compounds the problem. Restorative sleep requires clean sheets, breathable blankets, and neck support.[95] In some prisons, however, people receive only one blanket, some of which are made from coarse or recycled materials that cause itching or skin irritation.[96] Many prisons do not provide adequate pillows, and some do not provide pillows at all.[97] These conditions are especially harmful for people with allergies, chronic pain, or medical conditions that already interfere with sleep.

Even when a medical need is identified, incarcerated people are not always guaranteed access to the mattresses and bedding they need to achieve restorative sleep. In Texas, for example, an incarcerated man repeatedly requested a cotton blanket after developing severe allergic reactions to the standard-issue synthetic blanket, including open sores and persistent discomfort that interfered with his ability to sleep.[98] Prison officials responded not by providing an alternative, but by withholding a blanket altogether, leaving him cold at night and unable to

[94] Heffernan and Blakinger, "'Sleep Don't Come'"; Chanell Burnette, "Two Decades of Prison, Two Decades of Declining Health," *Prison Journalism Project*, March 30, 2023, https://prisonjournalismproject.org/2023/03/30/prison-caused-me-so-much-pain/; Joybelle Phelan, "When I Left the Women's Prison, Health Issues Followed Me," *Prison Journalism Project*, February 23, 2023, https://prisonjournalismproject.org/2023/02/23/health-issues-followed-me-outside-prison/; Jessie Milo, "House of Milo: My California Prison Cell," *Prison Journalism Project*, September 14, 2023, https://prisonjournalismproject.org/2022/12/05/house-of-milo-my-california-prison-cell/.

[95] Li et al., "How Do Sleepwear and Bedding Fiber Types Affect Sleep Quality: A Systematic Review," *Journal of Sleep Research* 33, no. 6 (2024): e14217, 5, https://doi.org/10.1111/jsr.14217; Sharon Brock, "5 Simple Changes to Your Bedroom for Better Sleep," *Stanford Lifestyle Medicine*, October 21, 2025, https://lifestylemedicine.stanford.edu/bedroom-changes-sleep-routine/.

[96] Julia Jacobs, "Texas Inmate with Allergies Has Asked for a Cotton Blanket for 10 Years, Lawsuit Says," *The New York Times*, April 6, 2019, https://www.nytimes.com/2019/04/06/us/texas-inmate-wool-allergy.html.

[97] Jennifer Toon, "Remarks at the ADEPT Panel Discussion," (LBJ School of Public Affairs, 2022).

[98] Jacobs, "Texas Inmate with Allergies."

Source: New Jersey Office of the Corrections Ombudsperson, photograph of a mattress in a New Jersey prison, email to authors, September 5, 2023.

sleep consistently, even as his medical condition worsened.[99] This case underscores that, even when sleep loss is directly tied to medical need, access to adequate bedding is not assured.

Cleanliness presents another barrier to restorative sleep. Some prisons force incarcerated people to sleep on dirty, unsanitary mattresses and bedding. In Connecticut, for example, an incarcerated person was awarded a settlement for being forced to sleep on a mattress that smelled of vomit and mildew and was missing much of its stuffing, causing pain and contributing to chronic sleep loss.[100] Bed bug and lice infestations in mattresses are also an issue in jails. In facilities across the south, for example, incarcerated people reported mattresses and bunks crawling with bed bugs, leading to repeated bites, itching, anxiety, and intentional efforts to remain awake to avoid being bitten.[101] The problem was so severe in Georgia that a man died in the Fulton County Jail after being held in a cell with a severe bed bug infestation. Multiple reports documented that his body was covered in bites and that the conditions in the cell were heavily infested.[102] Unsanitary bedding and mattresses not only pose health risks but also make sustained sleep difficult or impossible.

In some facilities, the problem goes even further: incarcerated people are forced to sleep directly on the concrete floor because beds or mattresses are not available at all. A 2019 health inspection of Mississippi State Penitentiary at Parchman, for example, found cells with no

[99] Jacobs, "Texas Inmate with Allergies."

[100] John Christofferson, "Connecticut Inmate Wins $12K verdict over foul mattress," *The Bulletin*, January 31, 2014, https://www.norwichbulletin.com/story/news/courts/2014/01/31/connecticut-inmate-wins-12k-verdict/39724821007/; Daniel Tepfer, "Inmate Wins Dirty Mattress Lawsuit," *CT Insider*, January 31, 2024, https://www.ctinsider.com/local/article/inmate-wins-dirty-mattress-lawsuit-5194109.php.

[101] Mariah Medina, "Dozens of Inmates Relocated After Bed Bugs Found at Bexar County Jail," *KSAT*, October 4, 2018, https://www.ksat.com/news/2018/10/04/dozens-of-inmates-relocated-after-bed-bugs-found-at-bexar-county-jail/; Doha Madani, "Man Died of 'Severe Neglect' in Fulton County Jail, Including Bed Bug Infestation, Autopsy Shows," *NBC News*, May 22, 2023, https://www.nbcnews.com/news/us-news/man-died-severe-neglect-fulton-county-jail-bed-bug-infestation-autopsy-rcna85676; Jack Money, "Jail Replacing Mattresses in Effort to Evict Bed Bugs from Detainee Population," *The Oklahoman*, July 24, 2023, https://www.oklahoman.com/story/news/local/2023/07/24/oklahoma-county-jail-replaces-mattresses-to-address-cited-health-concerns/70426504007/.

[102] Madani, "Man Died of 'Severe Neglect' by Bed Bugs."

mattresses or pillows, leaving people to sleep on bare surfaces.[103] Local reporting later confirmed that this was not an isolated problem, but a routine condition during periods of overcrowding.[104] Sleeping on a hard floor or slab is not simply uncomfortable—it increases pain, disrupts sleep, and leads to chronic exhaustion.

These conditions are not anomalies. Inadequate mattresses, insufficient bedding, and unsanitary conditions are routine features of incarceration that systematically erode restorative sleep.

"No reasonable person would allow this mattress into their home. No one would let their dog sleep on it. No one would sleep on it themselves for an hour, let alone one night, let alone 200 nights, which is what he was forced to do."

— Antonio Ponvert III, attorney for an incarcerated person at a Connecticut prison

Source: John Christofferson, "Connecticut Inmate Wins $12K verdict over foul mattress," *The Bulletin*, January 31, 2014, https://www.norwichbulletin.com/story/news/courts/2014/01/31/connecticut-inmate-wins-12k-verdict/39724821007.

[103] Josh Carter, "No Power, No Pillows: June Inspection Report Shows Conditions Inside Parchman," *WLBT3*, January 5, 2020, https://www.wlbt.com/2020/01/05/no-power-no-pillows-june-inspection-report-shows-condition-inside-parchman/; Mississippi State Department of Health, *Mississippi State Penitentiary (Parchman, Mississippi) 2019 Health Inspection Annual Report*, June 3-7, 2019, 3, https://www.scribd.com/document/441791723/2019-Parchman-Inspection-001#from_embed.

[104] Michelle Liu, "No Water, No Lights and Broken Toilets: Parchman Health Inspection Uncovers Hundreds of Problems," *Mississippi Today*, August 5, 2019, https://mississippitoday.org/2019/08/05/no-water-no-lights-and-broken-toilets-parchman-health-inspection-uncovered-hundreds-of-problems-many-repeat-violations/.

Source: Hawaii Correctional System Oversight Commission, photograph of a cell in Hawaii, email to authors, August 31, 2023.

b. Unregulated temperatures

Temperature plays a central role in the body's ability to fall asleep and stay asleep. During the light sleep stage, the body naturally lowers its core temperature by a degree or two, a process that signals readiness for sleep and supports progression into deeper, more restorative sleep stages.[105] Research shows that environments that are too hot or too cold interfere with this process, increasing nighttime awakenings and reducing time spent in deep and REM sleep.[106] While the ideal temperature range for sleeping varies among individuals, sleep specialists generally recommend a temperature between 60 and 67 degrees Fahrenheit to support uninterrupted sleep.[107] When temperatures fall too far outside this range, sleep can be disrupted.

The temperature in many prisons and jails routinely falls well outside this range, and incarcerated people have no control over the thermostat. During the winter months, incarcerated people routinely report cold living spaces. Incarcerated people at Dauphin County Prison in Pennsylvania, for example, reported that it gets so cold they can see their breath indoors, and the cold prevents them from sleeping.[108] Extreme cold is also dangerous in facilities in southern states, most of which are not prepared for the lows. During the 2021 winter storm in Texas, for example, incarcerated people reported sleeping in unheated facilities, wrapped in whatever clothing or blankets they could find; some described deliberately staying awake out of fear that falling asleep could mean not waking up at all.[109] In these conditions, sleep disruption is nearly inevitable, driven by the body's need for a warmer temperature and by the fear of hypothermia or death.

> "Many of the inmates, my husband included, fear going to sleep because they're afraid that they're going to die in their sleep."
>
> **— Nichole J., wife of an incarcerated person at a Texas prison**
>
> **Source:** Shannon Heffernan and Keri Blakinger, "'Sleep Don't Come': The Dangerous Problem of Sleep Deprivation Behind Bars," *The Marshall Project*, December 12, 2024, https://www.themarshallproject.org/2024/12/12/sleep-don-t-come-the-dangerous-problem-of-sleep-deprivation-behind-bars.

Heat poses an equally serious and persistent threat to sleep in prisons, especially in southern states where summer temperatures regularly exceed 100 degrees Fahrenheit. Despite the predictable heat, many prison systems lack air conditioning in housing units. For example, as of

[105] Harvard Medical School Division of Sleep Medicine, "Science of Sleep: What Is Sleep?"
[106] Okamoto-Mizuno and Mizuno, "Effects of Thermal Environment," 1.
[107] Brock, "5 Simple Changes."
[108] Jafaari, "Dauphin County Prisoners."
[109] Jolie McCullough, "Texas Jails and Prisons See Brutal Cold and Overfilled Toilets in Winter Storm," *Texas Tribune*, February 18, 2021, https://www.texastribune.org/2021/02/18/texas-jails-prisons-winter-storm/.

2019, only 30 of Texas's 109 prisons had air conditioning throughout inmate housing areas.[110] While the Texas Department of Criminal Justice, the state's prison agency, has made progress since then to cool additional housing units, nearly two-thirds of its facilities have only partial or no air conditioning.[111] Texas is not alone. At least 13 Southern states do not require universal air conditioning in prisons, despite indoor temperatures of facilities regularly exceeding 100 degrees Fahrenheit during the summer months.[112] Incarcerated people in these prisons have described waking repeatedly drenched in sweat, sleeping on concrete floors in search of cooler air, or soaking their clothes in sinks before lying down.[113] When nighttime heat prevents the body's core temperature from dropping as it naturally must to initiate and sustain sleep, it disrupts the biological process that allows for deeper, restorative sleep.

"Without options, [Lovinah Igbani] would lay on her bunk with her cellmate's sweat dripping onto her."

— Madison Pauly, *Mother Jones*, describing a formerly incarcerated woman's experience at a Texas prison

Source: Madison Pauly, "As Texas Enters Another Hot Summer, Lawmakers Kill Effort to Cool Sweltering Prisons," *Mother Jones*, May 30, 2021, https://www.motherjones.com/criminal-justice/2021/05/texas-prisons-air-conditioning/.

Incarcerated people are also exposed to other prisoners' sweat, further disrupting their sleep. One formerly incarcerated woman recalled waking up to find sweat dripping onto her face from the person sleeping above her.[114] These conditions make sustained sleep nearly impossible, but unlike people living in the community, people who are incarcerated cannot use fans freely or leave overheated spaces. As a result, instead of cycling through restorative stages of sleep, the body remains in a state of heat stress, increasing heart rate, dehydration, and cardiovascular strain—conditions that are exacerbated by sleep loss.

Whether too cold or too hot, unhealthy temperatures disrupt the environment required for restorative sleep. People either wake repeatedly throughout the night or avoid sleeping altogether out of fear for their health and safety. In prison environments where temperature extremes are routine rather than exceptional, sleep disruption becomes chronic, undermining health, emotional regulation, and daily functioning, night after night.

[110] Alexi Jones, "Cruel and Unusual Punishment: When States Don't Provide Air Conditioning in Prison," Prison Policy Initiative, June 18, 2019, https://www.prisonpolicy.org/blog/2019/06/18/air-conditioning/.
[111] Amanda Watford, "Extreme Heat in Prisons Bring More Legal Challenges, Pressure on States," *Stateline*, August 20, 2025, https://stateline.org/2025/08/20/extreme-heat-in-prisons-brings-more-legal-challenges-pressure-on-states/.
[112] Julie O'Donoghue, "Louisiana Prison Officials Push for Air Conditioning After Fighting Lawsuit," *Louisiana Illuminator*, March 23, 2022, https://lailluminator.com/2022/03/22/louisiana-prison-officials-push-for-air-conditioning-after-fighting-lawsuit/; Jones, "Cruel and Unusual Punishment."
[113] Gabrielle Banks, "Air Conditioning Could Extend to Texas Inmates Statewide Following Historic Lawsuit," *Houston Chronicle*, May 7, 2018, https://www.houstonchronicle.com/news/houston-texas/houston/article/Air-conditioning-could-extend-to-Texas-inmates-12887964.php.
[114] Michael Barajas, "Yet Again, Texas Lawmakers Face Crisis Conditions in Texas Prisons," *Texas Observer*, May 19, 2021, https://www.texasobserver.org/yet-again-texas-lawmakers-face-crisis-conditions-in-texas-prisons/.

c. Unsafe sleeping arrangements

Sleep quality also depends on sleeping arrangements that elicit a sense of physical stability and personal space. Yet, many prisons and jails rely on incarcerated people sleeping in bunk beds without guardrails or ladders, despite the recognized risk of injury from falls. At a county jail in Idaho, for example, an incarcerated man fell from the top bunk when he was ordered to descend for count; his bunk was not equipped with a ladder.[115] In Pennsylvania, an incarcerated man fell out of a top bunk at a state prison because his bunk wasn't equipped with safety rails.[116] In Ohio, an elderly incarcerated man fell from the top bunk onto the concrete floor of the dorm where he and other incarcerated people lived; his bunk had no side rails, and no attempt was made to affix rails to his bunk.[117] While a federal judge later ruled that the absence of guardrails did not violate constitutional standards, the case illustrates the physical instability many incarcerated people face as they try to sleep. When people feel unsteady in bed, their bodies struggle to relax enough to enter deeper stages of sleep.

Source: Photograph taken by Alycia Welch during a visit at a prison in Washington State with the Office of the Corrections Ombuds, March 8, 2024.

The risk of injury from falls like these is well-known. In fact, between 2006 and 2015, 29% of all bunk bed injuries resulting in an emergency department visit in people older than 10 years old occurred in a jail.[118] Sleeping on an upper bunk requires balance and spatial awareness, conditions that can be compromised by medication side effects, chronic illness, or even sleep loss itself.[119] In the same study, injuries related to seizure disorder were four and a half times more common among incarcerated adults than non-incarcerated adults.[120]

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[115] Jacob Barrett, "Idaho Supreme Court Finds Ladderless Bunks a 'Sound Discretionary Decision,' but Says Resulting Injury Could Give Rise to Negligence Claim," *Prison Legal News*, August 1, 2022, https://www.prisonlegalnews.org/news/2022/aug/1/idaho-supreme-court-finds-ladderless-bunks-sound-discretionary-decision-says-resulting-injury-could-give-rise-negligence-claim.

[116] Matt Miller, "U.S. Judge Kills Lawsuit by Prisoner Who Fell Out of Bunk Bed," *PennLive*, January 23, 2018, https://www.pennlive.com/news/2018/01/us_judge_kills_lawsuit_by_pris.html.

[117] Dan Trevas, "Court of Claims: Prison at Fault for Injuries of 80-Year-Old Inmate Who Fell From Bunk," *Court News Ohio*, February 13, 2015, https://www.courtnewsohio.gov/cases/2015/COA/0213/2013-00671.asp.

[118] Randall T. Loder and Jocelyn Cole Young, "Injuries Associated with Bunk Beds That Occur in Jail," *Journal of Forensic and Legal Medicine* 53 (2018): 14, https://doi.org/10.1016/j.jflm.2017.10.007.

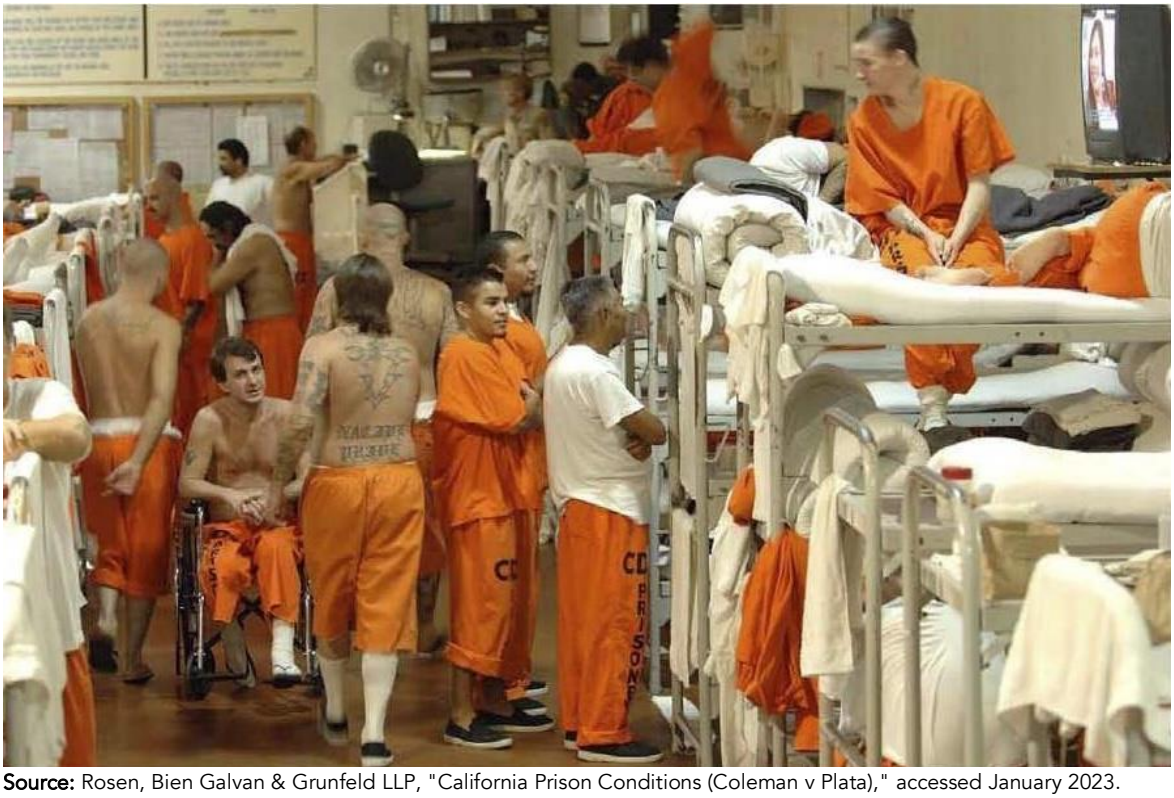
[119] Anna Schliehe and Ben Crewe, "Top Bunk, Bottom Bunk: Cellsharing in Prisons," *British Journal of Criminology* 62, no. 2 (2022): 492, https://doi.org/10.1093/bjc/azab053.

[120] Erin Polka, "Bunk Bed Trauma—Injuries While Incarcerated," *Public Health Post*, April 11, 2018, https://publichealthpost.org/health-equity/bunk-bed-injuries-while-incarcerated/.

Even when there are known medical issues that require an incarcerated person to sleep on a lower bunk, prison and jail staff do not always accommodate. For example, an incarcerated man at a federal prison in Colorado fell from a top bunk and sustained injuries to his head, elbow, and knee, despite his claim that he informed prison staff he had "medical duty status" and needed a lower bed as a result.[121]

Absent falls and the fear of falling, bunk beds still amplify nighttime disruption. Movement by one person transfers to the other, metal frames generate noise, and people on lower bunks experience repeated disturbances from activity above them.

Beyond the issues associated with bunk bed sleeping, sharing close quarters in a cell or dormitory with someone just a few feet away means that every movement, cough, snore, or shift in position can interrupt sleep. In dormitory-style housing, where dozens of people sleep in the same open room, these disturbances multiply. One formerly incarcerated man described frequent conflicts driven by sleep disruption, recalling fights over people having a cold.[122] Even when these disturbances do not fully wake someone, they can cause repeated micro-arousals that fragment sleep and prevent completion of restorative sleep cycles.



Source: Rosen, Bien Galvan & Grunfeld LLP, "California Prison Conditions (Coleman v Plata)," accessed January 2023.

[121] Michael Karlik, "Prison Officials May Be Sued for Colorado Inmate's Fall, Injury from Top Bunk," *Denver Gazette*, August 4, 2021, https://www.denvergazette.com/2021/08/04/prison-officials-may-be-sued-for-colorado-inmates-fall-injury-from-top-bunk-c27855c0-df1f-59f2-9040-e811597ce20d/.

[122] Fabricius, "ADEPT Panel Remarks," 2022.

At the same time, some formerly incarcerated women have described dormitory-style housing as providing an important sense of community and safety—a condition particularly salient in women's facilities that single- or double-occupancy housing does not always provide.[123] This perspective reflects a body of research and practice recognizing that prisons and jails were not designed with women in mind and that incarcerated women have distinct needs, including the need for connection and mutual support.[124] When corrections agencies provide meaningful opportunities for connection and mutual support, women in custody are more likely to experience a sense of safety and security in their living environments. This perspective also points to a broader structural issue: in many facilities, opportunities to foster that sense of community and safety through daytime programming, shared activities, and supportive environments are limited, making sleeping arrangements serve as a substitute for these essential forms of connection. While the value of community and safety is clear, the conditions that define dormitory-style sleeping—constant noise, movement, and lack of personal space—are fundamentally misaligned with what sleep science identifies as necessary for restorative sleep.

Overcrowding can magnify these issues. In some facilities, crowding has led to practices known as "hot bunking" or "hot racking," in which multiple people rotate through the same bed in shifts. Mississippi law explicitly authorizes such practices during periods of overcrowding.[125] In these arrangements, only one person sleeps at a time while others remain awake, often on schedules that do not align with the body's natural circadian rhythm. Sleeping during the day or at irregular hours makes it harder to fall asleep and stay asleep, while sharing unwashed bedding can further disrupt sleep and raise concerns about hygiene.

Instead of allowing the body to enter restorative sleep stages, sleeping arrangements in prisons and jails—bunk beds without safety features, crowded dormitories, and rotating beds—undermine the physical stability, sense of security, and quiet environment that restorative sleep requires.

d. Fear and anxiety

Sleep depends not only on physical conditions but also on whether the nervous system can shift out of a state of vigilance induced by fear, anxiety, and worry. Environments where people feel unsafe are associated with shorter and poorer quality sleep.[126] In prison, fear of violence from other incarcerated people, retaliation from staff, or sudden disturbances at night can keep the body in a constant state of alertness that is incompatible with restorative sleep.[127]

[123] Jennifer Toon, "Remarks at 'The Nightmare of Sleep in Prison' Panel Discussion," LBJ School of Public Affairs at The University of Texas at Austin, 2026.
[124] Alycia Welch and Michele Deitch, *The Pandemic Gender Gap Behind Bars*, Lyndon B. Johnson School of Public Affairs, May 2021, 23.
[125] Miss. Code Ann. § 47-5-132 (2010), https://law.justia.com/codes/mississippi/2010/title-47/5/47-5-132/.
[126] Elumn et al., "'What if That's Your Last Sleep?'" 6.
[127] Elumn et al., "'What if That's Your Last Sleep?'" 6.

This fear is not unfounded. Violence is known to be pervasive and unpredictable in prisons. For example, in Alabama, an incarcerated man awoke to find his bed on fire, a blaze intentionally set by another incarcerated person.[128] At the same prison, two prisoners stood guard at the doors of a dormitory while two others stabbed a man inside.[129] In fact, over the course of a week, men were stabbed with makeshift knives, beaten with a sock filled with metal locks, sexually assaulted at knifepoint, and beaten to the point of hospitalization, while others fatally overdosed on synthetic drugs.[130] The U.S. Department of Justice found that chronic violence, stabbing, and inadequate supervision created dangerous conditions, concluding that people lived with ongoing fear for their safety—conditions that impede sleep.[131] While the DOJ report focused on constitutional violations, its findings describe an environment fundamentally incompatible with the psychological safety required for sleep.

> "It's like a bubble: Everything builds up and builds up and builds up. [I]f you have enough of those individuals in the same environment, it's eventually gonna pop."
>
> **— Anonymous incarcerated person at Florence State Prison Complex (Arizona)**
>
> **Source:** Shannon Heffernan and Keri Blakinger, "'Sleep Don't Come': The Dangerous Problem of Sleep Deprivation Behind Bars," *The Marshall Project*, December 12, 2024, https://www.themarshallproject.org/2024/12/12/sleep-don-t-come-the-dangerous-problem-of-sleep-deprivation-behind-bars.

While Alabama prisons are notoriously violent, violence in prison is a common experience, and its impact on sleep is well-known. A formerly incarcerated person who spent time in Connecticut prisons reported watching a person jump off a housing tier to hang himself and later waking up thinking about it.[132] Others describe being so afraid of assaults that some took precautions when they went to bed, such as keeping a weapon ready under their pillow to protect themselves from violence that may occur during the night.[133] Another formerly incarcerated man explained that he could not sleep deeply without feeling exposed, a pattern that persisted for years and followed him even after release.[134] Exposure to violence and the persistent threat of violence is associated with difficulty reaching and sustaining deeper stages of sleep, particularly rapid eye movement (REM) sleep, which plays a critical role in emotional processing and stress regulation.[135] The nervous system never fully disengages from threat monitoring.

[128] Lyman et al., "DOJ Rips Alabama."
[129] Lyman et al., "DOJ Rips Alabama."
[130] Lyman et al., "DOJ Rips Alabama."
[131] Lyman et al., "DOJ Rips Alabama."
[132] Elumn et al., "'What if That's Your Last Sleep?'" 4.
[133] Elumn et al., "'What if That's Your Last Sleep?'" 4.
[134] Elumn et al., "'What if That's Your Last Sleep?'" 4.
[135] Elumn et al., "'What if That's Your Last Sleep?'" 5.

"If you're serving hard time inside a California prison, you'll often find yourself stuck in a cramped cell with a stranger. You hang a bedsheet to manufacture the semblance of privacy between bed and toilet. Any little thing can erupt into a source of tension and angst—body odor, snoring, lights."

— Joe Garcia, *CalMatters*, describing California prisons

Source: Joe Garcia, "Some Say California Prisons Should Have More Single-Cell Units," *Los Angeles Times*, December 6, 2025, https://www.latimes.com/california/story/2025-12-06/some-say-california-prisons-should-have-more-single-cell-units.

In some facilities, these risks are compounded by the practice of double-bunking in solitary confinement units, where two people are housed together in spaces designed for isolation. Reports from Texas describe individuals confined in small cells for up to 23 hours a day with a cellmate they did not choose, often with no ability to separate in the event of conflict.[136] In these settings, tensions can escalate quickly, and the inability to exit or seek help heightens the risk of violence. Similar practices have also been documented in other states.[137] Being locked in a confined space overnight with another person under these conditions can intensify fear and hypervigilance, further undermining the ability to fall asleep or stay asleep.

Beyond violence, incarcerated people are witnesses to other traumatic events in prisons and jails, and their resulting ruminations about those events further impede restorative sleep. For example, another formerly incarcerated person recounted waking to a loud noise in his cell and looking out the door to find his best friend on the floor receiving resuscitation without success.[138] His friend's death destroyed him, and he recalled thinking as he tried to fall asleep, "I can't die here…I can't, I can't do it."[139]

Fear and anxiety in prison are not limited to the threat of violence. In one study of incarcerated women at a maximum-security prison in Pennsylvania, the majority of participants described persistent nighttime worry about their children and family members as a central barrier to sleep.[140] Many reported that their minds raced most intensely at night, leaving long stretches of alone time to ruminate. Women described lying awake replaying fears about their children's safety, health, and well-being, worrying about missed milestones, birthdays, and the long-term

[136] Jeremy Busby, "No Exit: Death and Despair in Texas's 'Double-Cell' Solitary Units," *Solitary Watch*, March 31, 2025, https://solitarywatch.org/2025/03/31/no-exit-death-and-despair-in-texass-double-cell-solitary-units/.
[137] Cindy Gonzalez and Zach Wendling, "Nebraska Bills Call for End to 'Double-Bunking' Inmates, Caution in Prosecutorial Decisions," *Nebraska Examiner*, January 10, 2025, https://nebraskaexaminer.com/2025/01/10/nebraska-bills-call-for-end-to-double-bunking-inmates-caution-in-prosecutorial-decisions/.
[138] Elumn et al., "'What if That's Your Last Sleep?'" 4.
[139] Elumn et al., "'What if That's Your Last Sleep?'" 4.
[140] Harner and Budescu, "Sleep Quality and Risk," 164.

consequences of their absence.[141] Some spoke of praying at night that their children were okay, while others described reliving traumatic losses or dwelling on guilt and shame related to past decisions.[142] These intrusive thoughts were not fleeting worries but persistent cognitive and emotional loops that intensified at night, making it difficult to calm the mind and fall asleep.

When fear becomes routine, sleep disruption becomes a predictable physiological consequence. Researchers consistently identify insomnia, hypersomnia, nightmares, and night terrors among people exposed to trauma during incarceration.[143] Nighttime fear and anxiety activate the body's stress response, increasing heart rate, muscle tension, and cognitive arousal when the brain needs to be powering down.[144] They also lengthen the time it takes to fall asleep, increase nighttime awakenings, and sharply reduce time spent in deep and REM sleep.[145] Over time, sleep becomes lighter, more fragmented, and less restorative. In prisons and jails where fear is common and often rational, sleep disruptions are a predictable outcome of conditions that keep the nervous system on high alert.

> **Women described lying awake replaying fears about their children's safety, health, and well-being, worrying about missed milestones, birthdays, and the long-term consequences of their absence.**

2. Nighttime operations that disrupt sleep

Even when physical sleeping conditions are adequate, restorative sleep depends on how daily life is structured. In prisons and jails, routine operations—schedules, counts, lighting practices, and noise—shape when people are allowed to sleep, how often that sleep is interrupted, and whether the body's natural sleep-wake cycle can function as intended.

[141] Harner and Budescu, "Sleep Quality and Risk," 164.
[142] Harner and Budescu, "Sleep Quality and Risk," 164.
[143] Elumn et al., "'What if That's Your Last Sleep?'" 5.
[144] Allison G. Harvey, "A Cognitive Model of Insomnia," *Behaviour Research and Therapy* 40, no. 8 (2002): 869, https://doi.org/10.1016/S0005-7967(01)00061-4.
[145] Germain, "Sleep Disturbances," 373.

a. Daily schedule misaligned with circadian rhythms

The timing of sleep is just as important as its duration. Sleep experts consistently find that aligning sleep with circadian rhythm—a 24-hour biological cycle regulated primarily by light exposure and the hormone melatonin—improves sleep quality, emotional regulation, and cognitive functioning.[146]

Prison schedules, however, routinely work against these markers. Incarcerated people are typically required to wake hours before sunrise, often well before their bodies are biologically prepared to do so. In Texas prisons, for example, "lights out" is at 10:30 p.m. At 1:00 a.m., some incarcerated people are roused for a head count and required to verbally identify themselves, and around 2:00 a.m., they are woken again for breakfast, which leaves only three and a half hours for sleep, and only two and a half uninterrupted.[147] Not only is this amount of sleep too short according to experts, but when this practice was challenged in *Garrett v. Lumpkin*, the notoriously conservative U.S. Fifth Circuit Court of Appeals allowed the case to proceed, recognizing that this schedule leaves too little time for sleep and could amount to sleep deprivation.[148]

"No one can argue with the proposition that detainees with medical needs should get their prescriptions, but why at 2:30 a.m.?"

— U.S. District Judge James Donato, Upshaw v. Alameda County

Source: Helen Christophi, "Judge Orders Jailers to Let Female Inmates Sleep," Courthouse News Service, March 27, 2019, https://www.courthousenews.com/judge-chastises-jail-officials-for-inmates-lack-of-sleep.

Texas is not an outlier. Incarcerated people in other prison and jail systems describe similar daily schedules that are misaligned with the natural sleep-wake cycle. At the Santa Rita Jail in Alameda County, California, medication distribution (commonly referred to as "the pill line") took place at 2:30 a.m., followed by breakfast at 4:00 a.m., forcing people in custody to fully awaken long before dawn.[149] A federal judge, in an order he issued to the county in response to a lawsuit, questioned the necessity of this practice, rejecting the county's argument that the timing was medically required and ordering adjustments to allow additional sleep.[150] This case highlights that sleep timing in prisons and jails is structured around operational priorities and decisions, not around the biological processes that govern restorative sleep.

[146] Roenneberg et al., "Social Jetlag," 939.
[147] Pitcher, "Some Texas Prisoners."
[148] Pitcher, "Some Texas Prisoners."
[149] Helen Christophi, "Judge Orders Jailers to Let Female Inmates Sleep," *Courthouse News Service*, March 27, 2019, https://www.courthousenews.com/judge-orders-jailers-to-let-female-inmates-sleep/.
[150] Amanda Robert, "Judge Sides with Female Inmates on Sleep's Importance," *American Bar Association (ABA) Journal*, April 24, 2019, https://www.abajournal.com/news/article/judge-sides-with-female-inmates-on-sleeps-importance.

The timing of evening medication distribution can also be misaligned with the natural sleep-wake cycle. At a prison in Vermont, incarcerated people reported being required to take sedating medications such as trazodone and mirtazapine at 5:30 p.m., many hours before lights-out (at 10:00 p.m.), causing grogginess early in the evening but wakefulness later at night.[151] These policies can inadvertently worsen insomnia by decoupling medication effects from the period designated for sleep.

Meal timing further compounds the problem. Dinner is often served in the middle of the afternoon, sometimes as early as 3:00 p.m., followed by long overnight gaps that leave people hungry at bedtime, while breakfast arrives in what would otherwise be the middle of the night (2:30 a.m. in Texas, 3:00 a.m. at the Santa Rita Jail). Mistimed meals disrupt circadian rhythms, leading to overnight sleep fragmentation.

When daily schedules consistently conflict with the body's natural sleep-wake cycle, sleep becomes shorter, lighter, and less restorative. Despite this recognition, early wake times and late bedtimes remain standard practice in many prisons and jails.

> "Why would you have to wake someone up at three to take their blood sugar for breakfast, and why do you have to have breakfast at four? That doesn't make sense to me. It's convenience. It has to do with their scheduling; it has to do with their shift changes. It has nothing to do with the impact on women."
>
> **— Yolanda Huang, attorney for lead plaintiffs, Upshaw v. Alameda County**
>
> **Source:** Helen Christophi, "Judge Orders Jailers to Let Female Inmates Sleep," *Courthouse News Service*, March 27, 2019, https://www.courthousenews.com/judge-chastises-jail-officials-for-inmates-lack-of-sleep.

b. Disruptive nighttime "count" protocols

Prison staff rely on regular head counts—commonly referred to as "counts"—to confirm that everyone in custody is present and alive. These checks occur routinely throughout the day and night, often every few hours, and more frequently in higher-security housing. While counts serve a legitimate safety purpose, the way they are conducted overnight—too frequently and with lights and noise—can significantly disrupt sleep. Ironically, practices intended to promote safety may instead exacerbate the very risks they are meant to reduce.

[151] Sorscher, Crockatt, and Johnston, "A Study of Sleep," 838.

Overnight counts occur in facilities where sleep schedules are already compressed. As described in the previous subsection, in Texas, a 1:00 a.m. count interrupts an already short sleep window—between a 10:30 a.m. lights-out and a 2:00 a.m. wake-up for medication line and breakfast—further fragmenting what little opportunity exists for consolidated rest.[152]

Counts occur even more frequently in secure housing units, where people are sent for disciplinary reasons or for additional protection. On these units, counts are typically conducted every thirty minutes throughout the night to prevent suicide attempts and completions. A study examining sleep among people incarcerated at a Vermont prison and a New Hampshire county jail showed that these frequent checks create near-constant arousal, making sustained sleep physiologically unattainable.[153]

Sleep experts have cautioned that waking someone every thirty minutes can be counterproductive, particularly for individuals already experiencing insomnia, depression, or heightened stress. In litigation involving Corcoran State Prison, in California, a Stanford University sleep medicine professor explained that unrelenting nighttime noise and forced awakenings during counts can worsen insomnia, deepen mood disturbance, and increase impulsivity—factors associated with greater, not lower, suicide risk.[154] Rather than stabilizing people in crisis, fragmented sleep can intensify emotional dysregulation and impair judgment, conditions that increase the risk of self-harm—the behavior that counts are designed to protect against.

Light and noise during overnight counts further disrupt sleep. Rather than conducting quiet visual checks, in many prisons and jails, counts that occur overnight involve bright flashlights, loud footsteps, jangling keys, and clamoring doors, disruptive enough to wake people and reset the sleep cycle.[155] In California, for example, men incarcerated at Pelican Bay State Prison's security housing unit reported being awakened every thirty minutes for welfare checks that included loud knocking, keys jangling, and flashlight beams directed into cells.[156] Similarly, an incarcerated man at a prison in Georgia described frequent middle-of-the-night emergency counts so disruptive that he wears earplugs simply to quiet the noise enough to fall into a shallow, albeit still vigilant, sleep.[157] These examples underscore how count practices can make uninterrupted sleep nearly impossible. Even brief awakenings, sometimes lasting only seconds, can prevent the brain and body from progressing into deeper sleep stages that support physical recovery, emotional regulation, and cognitive functioning.[158]

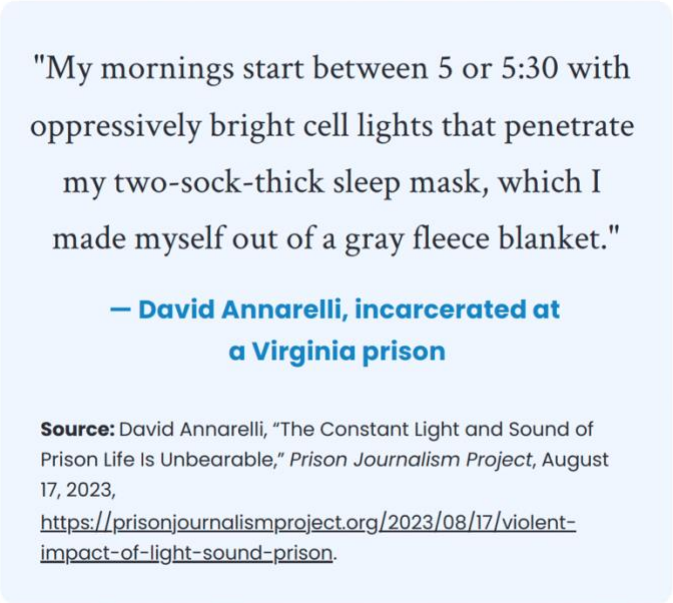
Frequent nighttime counts illustrate how routine operations in prisons and jails can undermine the sleep-wake cycle. When safety checks repeatedly interrupt sleep through light, noise, and

[152] Pitcher, "Some Texas Prisoners."
[153] Sorscher, Crockatt, and Johnston, "A Study of Sleep," 838.
[154] Stanton, "Update: California Inmate's Suit."
[155] Heffernan and Blakinger, "'Sleep Don't Come.'"
[156] Associated Press, "'Keep It Down.'"
[157] Heffernan and Blakinger, "'Sleep Don't Come.'"
[158] Edward. J. Stepanski, "The Effect of Sleep Fragmentation on Daytime Function," *Sleep* 25, no. 3 (2002): 268, https://doi.org/10.1093/sleep/25.3.268.

forced alertness, they prevent the continuity required for restorative sleep. The result is chronic sleep disruption embedded in the facility's daily operations.

c. Excessive lighting

Light is one of the most significant regulators of the sleep-wake cycle. Exposure to light suppresses melatonin, the hormone that helps initiate and maintain sleep. Darkness, by contrast, allows melatonin levels to rise and supports the body's natural transition into sleep.[159] Because of this, sleep researchers consistently emphasize that nighttime environments should be dark and minimize light exposure to support restorative sleep.[160] When darkness is absent, the body remains biologically primed for wakefulness rather than recovery.



In many prisons, however, lighting conditions work against these basic biological processes. Rather than providing a clear distinction between day and night, facilities often rely on constant or excessive illumination in housing units. Lights may remain on throughout the night for security reasons or be dimmed only slightly during designated "lights out" periods. Incarcerated people frequently report that overhead fluorescent lights, hallway lighting, or exterior security lights shine directly into their cells all night long, making it difficult to fall asleep or stay asleep.[161] These conditions prevent the brain from receiving a clear signal that nighttime rest is possible or safe.

In prisons and jails across the country, constant or pervasive artificial lighting interferes with sleep. In Virginia, for example, 5:00 a.m. or 5:30 a.m. wake-up calls are accompanied by bright lights that shine through sleep masks incarcerated people make out of blankets.[162] The light causes instant discomfort, pain, and anxiety.[163] Secure housing units can be even worse. In Pennsylvania state prisons, for example, solitary confinement cells are kept brightly lit 24 hours a day; one person described trying to block the light with socks, yet still feeling as if daytime never ends.[164] In these environments, meaningful restorative sleep becomes nearly impossible.

[159] David C. Holzman, "What's in a Color? The Unique Human Health Effects of Blue Light," *Environmental Health Perspectives* 118, no. 1 (2010): A22, https://doi.org/10.1289/ehp.118-a22.
[160] Czeisler et al., "Bright Light Resets," 670.
[161] Heffernan and Blakinger, "'Sleep Don't Come.'"
[162] Annarelli, "Constant Light and Sound."
[163] Pitcher, "Some Texas Prisoners."
[164] Heffernan and Blakinger, "'Sleep Don't Come.'"

Even when staff observe "lights out," the resulting environment often fails to achieve true darkness. Lights may be dimmed rather than turned off, or illumination from control booths, hallways, or exterior floodlights may continue to spill into sleeping areas. In Texas, incarcerated people have reported hallway lights streaming in through cell windows.[165] In New Hampshire and Vermont, incarcerated people have described constant dim lighting from security lights and from light outside their windows.[166] They describe covering the security lights and windows with pieces of clothing, affixing them with toothpaste that they use as glue—coping strategies that can violate facility rules and result in disciplinary measures.[167] In this way, people are forced to choose between complying with regulations and protecting their ability to sleep. While these improvised efforts may block enough light to allow light sleep, they do not create the environment required for deep, restorative sleep.

Research on the factors that affect sleep helps explain why these lighting practices are so disruptive. Exposure to artificial light at night delays melatonin release, increases nighttime alertness, and fragments sleep.[168] The blue-wavelength light emitted by fluorescent and LED fixtures—the type used in many prisons—are particularly disruptive.[169] Even low-level light can reduce time spent in deep and REM sleep, the stages most critical for physical restoration, memory consolidation, and emotional regulation.[170] When exposure occurs night after night, the result is chronic misalignment of the circadian system.[171] Over time, this disruption undermines emotional regulation, impulse control, attention, and stress tolerance–capacities that are essential for functioning in congregate settings.

Healthy sleep depends not only on darkness at night, but also on sufficient exposure to natural light during the day. Under typical conditions, daylight suppresses melatonin and helps anchor the body's internal clock, promoting alertness during waking hours and allowing melatonin levels to rise reliably in the evening as light fades.[172] Sleep researchers consistently find that aligning sleep with this natural light–dark cycle improves sleep quality, emotional regulation, and cognitive functioning.[173] Yet many prisons limit access to outdoor spaces, windows, or meaningful daytime activities that would expose incarcerated people to natural light. Where incarcerated people spend long hours indoors under artificial lighting, the circadian system

[165] Pitcher, "Some Texas Prisoners."
[166] Sorscher, Crockatt, and Johnston, "A Study of Sleep," 837.
[167] Sorscher, Crockatt, and Johnston, "A Study of Sleep," 838.
[168] Mariana G. Figueiro and Mark S. Rea, "The Effects of Red and Blue Lights on Circadian Variations in Cortisol, Alpha Amylase, and Melatonin," *International Journal of Endocrinology* 2010, no. 1 (2010): Article 829351, 1, https://doi.org/10.1155/2010/829351.
[169] Figueiro and Rea, "Effects of Red and Blue Lights," 2.
[170] Christian Cajochen et al., "Evening Exposure to a Light-Emitting Diodes (LED)-Backlit Computer Screen Affects Circadian Physiology and Cognitive Performance," *Journal of Applied Physiology* 110, no. 5 (2011): 1432, https://doi.org/10.1152/japplphysiol.00165.2011.
[171] National Toxicology Program, *NTP Cancer Hazard Assessment Report on Night Shift Work and Light at Night*, (Research Triangle Park, NC: National Toxicology Program, 2021), 17, https://www.ncbi.nlm.nih.gov/books/NBK571591/.
[172] Czeisler et al., "Bright Light Resets," 667.
[173] Figueiro and Rea, "Effects of Red and Blue Lights," 1.

receives weak or inconsistent signals about when to be awake and when to sleep. Research shows that increased exposure to natural light during the day supports more stable sleep–wake rhythms and deeper sleep at night.[174] In prison environments, restricted daylight exposure and excessive nighttime illumination operate together to erode the body's ability to regulate sleep across the full 24-hour cycle.

d. Persistent noises

Noise is another reliable disruptor of restorative sleep. Sleep research shows that even brief arousals from noise can pull the brain out of deeper, restorative sleep stages.[175]

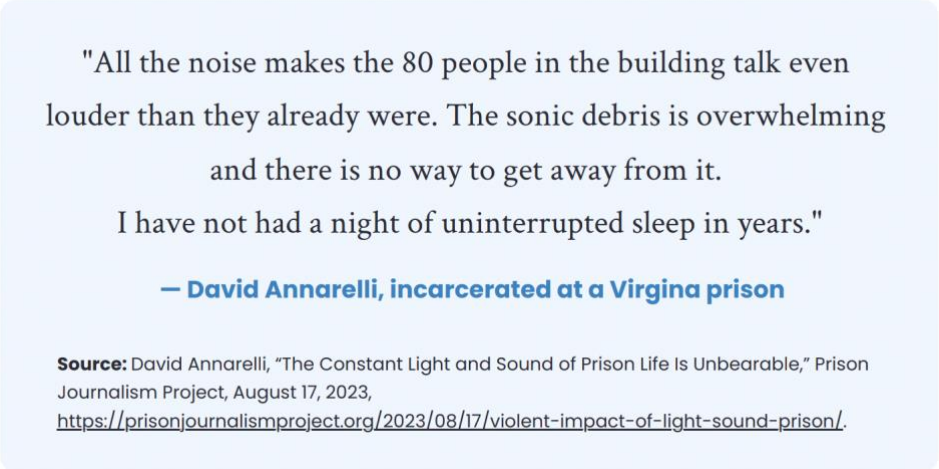
In prisons and jails, disruptive noise overnight is routine. Prisons are acoustically hostile environments by design. Concrete walls and open dormitory layouts amplify sound. Incarcerated people describe hearing clanging metal doors, buzzing electronic locks, radios, and loud ventilation systems while they are trying to sleep. Loud noises due to maintenance work at the Santa Rita Jail in Alameda County contributed to sleep disruptions and led a federal judge to restrict the Sheriff's Office from conducting overnight repairs.[176] Similarly, an incarcerated person at a facility in New Jersey described waking repeatedly to institutional noise long before

> "I can barely hear myself think. Metal stairs clank under the tread of institutional boots. Someone banging on a window or metal bar three stories up reverberates down the concrete walls. Men talk loudly, argue over debts or card games, they fight and yell. Men sing off-pitch at the top of their lungs, or amplify their headphones so that everyone in a 10-foot radius can hear what they're listening to. The dead of night is also consumed by noise. Men snore, fart, groan. Overzealous guards tap on metal doors with metal keys at 3 a.m. to 'ensure we are alive.'"
>
> **— Wes Lee, incarcerated at a New Jersey prison**
>
> **Source:** Wes Lee, "The Rare Sensation of Silence in Prison," *Prison Journalism Project*, August 21, 2025, https://prisonjournalismproject.org/2025/08/21/total-silence-in-prison-is-rare-but-meaningful.

[174] Wright et al., "Entrainment of the Human Circadian Clock," 1554.
[175] Stepanski, "The Effect of Sleep Fragmentation," 268.
[176] Heffernan and Blakinger, "'Sleep Don't Come.'"

morning.[177] These conditions ensure that the brain never fully disengages from its surroundings.[178] As a result, uninterrupted sleep becomes the exception rather than the norm.

Overnight count procedures also contribute to disruptive noises in housing units. At Pelican Bay State Prison in California, for example, where overnight counts occurred every thirty minutes, incarcerated people reported the sounds of pounding boots on concrete, jangling metal keys, clanging against metal bars, shouting commands, and metal doors slamming shut during counts, waking them multiple times during the night.[179] Repeated awakenings spaced across the night are especially disruptive because each interruption forces the brain to restart the sleep cycle from its lightest stages, reducing the amount of time spent in deeper sleep stages.[180]



Noise generated by other people further compounds the problem. In crowded dormitories, people sleep only a few feet apart; space is similarly limited in two-person cells where there is only a set of bunk beds, a toilet, and a sink. Snoring, coughing, restless movement, and whispered conversations routinely wake cellmates.[181] In higher-security units and psychiatric housing, nighttime noise is often more extreme. On those units, there is a lot of yelling, banging on doors or toilets, or crying out for help through the night without intervention.[182] Even when individuals are exhausted, these sounds trigger repeated arousals, fragmenting sleep and preventing progression into deeper stages.[183] The result is a sleep environment where incarcerated people are constantly awakened, preventing the deep rest the brain and body need to recover.

Wake-up calls in prison are also problematic. Incarcerated people describe being routinely awakened by a piercing call over the PA system, followed by staff blowing shrill whistles.[184] Sleep research shows that abrupt, commanding noises like these, intended to mobilize people quickly,

[177] Wes Lee, "The Rare Sensation of Silence in Prison," *Prison Journalism Project*, August 21, 2025, https://prisonjournalismproject.org/2025/08/21/total-silence-in-prison-is-rare-but-meaningful/.
[178] Halperin, "Environmental Noise and Sleep Disturbances," 210.
[179] Associated Press, "'Keep It Down.'"
[180] Yanpeng Li et al., "Effects of Chronic Sleep Fragmentation on Wake-Active Neurons and the Hypercapnic Arousal Response," *Sleep* 37, no. 1 (2014): 51, https://doi.org/10.5665/sleep.3306.
[181] Annarelli, "Constant Light and Sound."
[182] Lee, "The Rare Sensation of Silence."
[183] Mathias Basner et al., "Auditory and Non-auditory Effects of Noise on Health," *The Lancet* 383, no. 9925 (2013): 1327, https://doi.org/10.1016/S0140-6736(13)61613-X.
[184] Annarelli, "Constant Light and Sound."

activate the brain's stress response, elevating heart rate and cortisol, and pulling the body forcefully into wakefulness.[185] Waking people through fear-based shock may get incarcerated people out of bed quickly, but it does so by repeatedly activating the body's stress system, placing strain on physical health, worsening emotional regulation, and undermining the restorative function of sleep itself.

Persistent noise works alongside lighting and scheduling to keep incarcerated people in a state of partial wakefulness throughout the night. The brain remains on alert, deep sleep is curtailed, and restorative rest becomes increasingly difficult to achieve.

3. Daytime conditions that undermine sleep

Sleep is shaped not only by nighttime conditions, but also by what happens during the day. Restorative sleep depends on the sufficient buildup of "sleep pressure" throughout the day through activities that require movement, mental stimulation, nutrition, and social interaction. These activities also signal to the brain that it is time to be awake, preventing daytime napping that can impede deep, restorative sleep at night.[186]

In many prisons and jails, however, daily life is often structured in ways that run counter to these biological processes. Limited opportunities for physical activity, scarce programming, nutritionally inadequate food, and prolonged confinement reduce sleep pressure, blur the distinctions between day and night, and intensify rumination and stress. As a result, even if nighttime disruptions were reduced, daytime routines would continue to undermine sleep.

a. Limited opportunities for physical activity

Regular physical activity plays a central role in preparing the body for restorative sleep. Movement during the day helps regulate core body temperature, reduce stress hormones, improve mood, and increase metabolic expenditure—processes that help build sleep pressure and support deeper, more sustained sleep at night. Studies consistently show that people who engage in regular physical activity fall asleep more easily, spend more time in the deep and REM sleep stages, and wake less frequently during the night.[187] In short, exercise during the day helps signal to the brain that it is time to rest at night.

In many prisons, however, access to meaningful physical activity is limited by the conditions of the exercise spaces. Incarcerated people describe gyms that are poorly ventilated, dimly lit,

[185] Basner et al., "Auditory and Non-auditory Effects," 1327.
[186] Sleep Health Foundation, "Sleep and Circadian Basics," accessed January 12, 2026, https://www.sleephealth.org/sleep-circadian-basics/.
[187] Abdulmenaf Korkutata, Mustafa Korkutata, and Michael Lazarus, "The Impact of Exercise on Sleep and Sleep Disorders," *npj Biological Timing and Sleep* 2, no. 5 (2025): 1, https://doi.org/10.1038/s44323-024-00018-w.

overcrowded, and filled with broken or outdated equipment, making sustained exercise difficult or unappealing.[188] Outdoor yards are often barren, uneven, or exposed to extreme weather, with little functional equipment and few options beyond walking in circles.[189] Safety concerns—about violence, social dynamics, or being seen with the "wrong" people—discourage incarcerated people from going to the yard or gym for exercise.[190] These conditions turn what should be a source of physical exertion into an environment many avoid, reducing opportunities to build the sleep pressure needed for restorative sleep.

> "It's a 95-degree Tuesday in July in this barren box that we call a gym. There's no air conditioning, no fan blowing and no lights. The windows are so near the ceiling that daylight barely finds us. Razor wire tops the perimeter fence, patrolled by armed guards."
>
> **— Aaron M. Kinzer, incarcerated at a Pennsylvania prison**
>
> **Source:** Aaron M. Kinzer, "Working Out Provides Opportunity for Redemption," *Prison Journalism Project*, May 20, 2022, https://prisonjournalismproject.org/2022/05/20/working-out-provides-opportunity-for-redemption.

When formal exercise equipment is unavailable or removed, incarcerated people often improvise. An incarcerated person in a California prison relies on calisthenics, makeshift weights, and the creative use of everyday objects to stay active.[191] While these adaptations reflect a genuine desire for physical activity, they also underscore the lack of institutional support for it. Exercise becomes dependent on individual ingenuity, making it harder for consistent movement to support healthy sleep patterns.

Opportunities for exercise are even more constrained for people held in solitary confinement or administrative segregation. In these settings, recreation time is often limited to an hour or less in small, enclosed spaces, and access to equipment is sometimes limited or nonexistent.[192] While some individuals use this time to do bodyweight exercises, the intensity and duration are often insufficient to replicate the benefits of sustained physical activity.

These constraints are compounded by operational disruptions within facilities. For example, the spread of COVID-19 in prisons and jails further eroded access to exercise by eliminating team sports and recreational spaces in many facilities. Although some prisons have since reinstated

[188] Aaron M. Kinzer, "Working Out Provides Opportunity for Redemption," *Prison Journalism Project*, May 20, 2022, https://prisonjournalismproject.org/2022/05/20/working-out-provides-opportunity-for-redemption/.
[189] Eli Hager, "The Big Chill," *The Marshall Project*, November 29, 2018, https://www.themarshallproject.org/2018/11/29/the-big-chill.
[190] Hager, "The Big Chill."
[191] Tue Kha, "Staying Fit Inside," *Prison Journalism Project*, May 14, 2021, https://prisonjournalismproject.org/2021/05/14/staying-fit-inside/.
[192] Chad Weinstein, "What a Day in Prison Looks Like," *Prison Journalism Project*, December 10, 2023, https://prisonjournalismproject.org/2023/12/10/what-day-prison-looks-like/.

these activities, chronic understaffing has led to frequent lockdowns that cancel recreation altogether.[193] During lockdowns, incarcerated people may spend 20 to 23 hours a day confined to their cells, with no meaningful opportunity for movement.[194] Extended periods of inactivity can lead to daytime sleep driven by boredom and exhaustion, which, in turn, interfere with nighttime sleep and weaken circadian regulation.

In some facilities, operational responses to overcrowding further constrain access to exercise, directly undermining sleep. For example, reporting in 2019 revealed that staff at Dauphin County Prison in Pennsylvania managed overcrowding by assigning incarcerated people to specific time slots for gym access, with some scheduled during late-night hours.[195] While this approach maintained formal access to exercise, it did so by shifting some people's access into hours typically reserved for sleep. As a result, people assigned access to the gym during late-night hours were effectively forced to choose between sleep and exercise, or to engage in physical activity at times that disrupted the body's natural wind-down process. Notably, agency officials indicated at the time that they planned to eliminate these late-night scheduling practices, and in 2024, staff expanded access to physical exercise by providing people in custody with outdoor recreation.[196] Nevertheless, this example illustrates how operational constraints—particularly crowding and limited space—can lead to scheduling decisions that place physical activity in direct tension with the conditions necessary for restorative sleep rather than using it to support a healthy sleep-wake cycle for incarcerated people.

"Th[e] intensity [of the workouts] matches the mental strain that we endure daily: the rejected phone calls, denied visits, humiliating random pat downs and other micro-aggressions. The total body aerobic assault momentarily takes us away from our miseries."

— Aaron M. Kinzer, incarcerated at a Pennsylvania prison

Source: Aaron M. Kinzer, "Working Out Provides Opportunity for Redemption," *Prison Journalism Project*, May 20, 2022, https://prisonjournalismproject.org/2022/05/20/working-out-provides-opportunity-for-redemption.

Beyond its physical health benefits, exercise also plays a critical role in regulating stress and mental health. Physical activity is a well-established tool for reducing anxiety, depression,

[193] Erica Bryant, "'Lockdown' Is an Epidemic Plaguing U.S. Prisons," Vera Institute of Justice, October 31, 2024, https://www.vera.org/news/lockdown-is-an-epidemic-plaguing-u-s-prisons.
[194] Bryant, "'Lockdown' Is an Epidemic."
[195] Sean Sauro, "No More 3 a.m. Breakfasts: Changes Are Underway at Dauphin County Prison," *PennLive*, September 11, 2019, https://www.pennlive.com/news/2019/09/no-more-3-am-breakfasts-changes-are-underway-at-dauphin-county-prison.html.
[196] Joshua Vaughn, "Incarcerated People in Dauphin County Get Rec Time Outside for 1st Time in Decades," *PennLive*, September 5, 2024, https://www.pennlive.com/news/2024/09/incarcerated-people-in-dauphin-county-get-rec-time-outside-for-1st-time-in-decades.html.

and physiological arousal—each of which independently disrupts sleep.[197] In prison environments marked by chronic stress, the absence of physical outlets leaves people with fewer ways to release tension accumulated during the day. As a result, many arrive at bedtime mentally exhausted but physiologically under-stimulated, a state that makes deep, restorative sleep especially difficult to achieve.

Limited access to exercise, then, does more than affect physical fitness. It undermines the biological and psychological processes that enable deep, consolidated, restorative sleep.

b. Limited access to programming and structured activity

Beyond physical activity, programming offers another structured daytime option for incarcerated people. Education, vocational training, work assignments, and rehabilitative programs require sustained attention, learning, and social interaction—activities that reinforce daytime wakefulness and provide opportunities for mental stimulation, which helps build sufficient sleep pressure during the day. These shared routines also serve as social cues, reinforcing communal expectations about when to be active and when to rest, thereby helping synchronize internal biological rhythms with the external environment.[198]

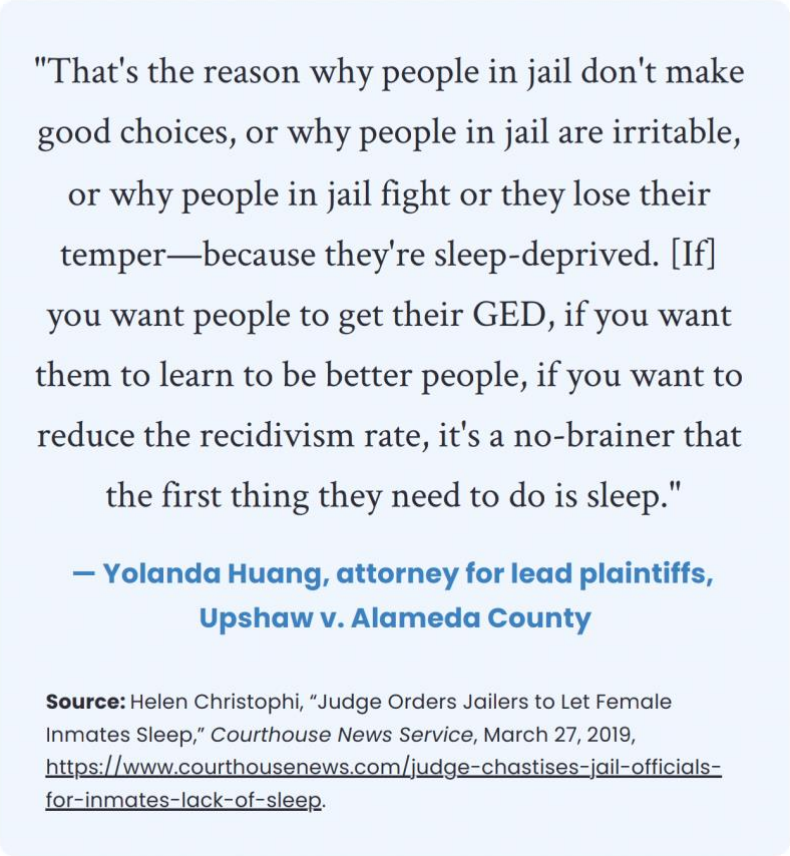
In practice, access to programming is constrained by staffing shortages, overcrowding, and funding limitations, leaving far more people eligible for programs than there are available slots.[199] Even where programs formally exist, long waitlists and eligibility restrictions based on custody level, disciplinary status, or housing assignment prevent many

> "In an attempt to disrupt the monotony of prison, we try to create our own personal routines filled with exercise, enrichment programs and constant work. Some of us play cards, watch sports or participate in hobbies such as sewing. But sooner or later, these routines also become monotonous...There is just no escaping this perpetual state of sameness because every aspect of it invades your space and overloads your senses."
>
> **— Jy'Aire Smith-Pennick, incarcerated at a Pennsylvania prison**
>
> **Source:** Jy'aire Smith-Pennick, "My Biggest Daily Challenge in Prison Isn't Violence. It's the Monotony," *The Marshall Project*, February 9, 2024, https://www.themarshallproject.org/2024/02/09/prison-dehumanization-process-monotony-mental-health.

[197] Andrea L. Dunn et al., "Exercise Treatment for Depression: Efficacy and Dose Response," *American Journal of Preventive Medicine* 28, no. 1 (2005): 1, https://doi.org/10.1016/j.amepre.2004.09.003.
[198] Barış Önen Ünsalver and Mehmet Emin Ceylan, "Sociodian Rhythm: Eye Contact and the Neurobiology of Social Synchronization," *Medical Research Archives* 13, no. 10 (2025): Article 6978, 4, https://doi.org/10.18103/mra.v13i10.6978.
[199] Leah Wang, "The State Prison Experience: Too Much Drudgery, Not Enough Opportunity," Prison Policy Initiative, September 2, 2022, https://www.prisonpolicy.org/blog/2022/09/02/prison_opportunities/.

incarcerated people from participating.[200] As a result, large portions of the prison population spend most of the day confined to housing units with little to do beyond watching television, playing cards, pacing, or lying on their bunks, but even these activities start to feel monotonous.[201] When daytime hours lack structure or purpose, the pressure required for restorative sleep is weakened.

Opportunities for programming are even more limited for people held in solitary confinement or other forms of restricted housing. Individuals in these units are typically excluded from group-based education, work, or rehabilitative activities altogether, leaving them with little cognitive or social stimulation during waking hours.[202] Unlike general population housing, where some activities, however limited, may still occur, restricted housing offers few meaningful ways to engage the mind during the day. This absence of structured activity erodes the signals that distinguish daytime wakefulness from nighttime rest, contributing to sleep-wake misalignment.



In prisons and jails where programming is scarce, napping becomes one of the only available coping strategies, but it actively undermines the ability to sleep at night. Sleep research shows that when people are inactive for long stretches, especially when time is instead spent lying in bed or taking a long daytime nap, the sleep pressure needed to support consolidated sleep at night weakens.[203] Moreover, boredom, frustration, and a sense of being stuck increase rumination and anxiety, which in turn make it harder to fall asleep and stay asleep.[204]

[200] Wang, "The State Prison Experience."
[201] Jy'aire Smith-Pennick, "My Biggest Daily Challenge in Prison Isn't Violence. It's the Monotony," *The Marshall Project*, February 9, 2024, https://www.themarshallproject.org/2024/02/09/prison-dehumanization-process-monotony-mental-health.
[202] David H. Cloud et al., "Public Health and Solitary Confinement in the United States," *American Journal of Public Health* 105, no. 1 (2015): 18, https://doi.org/ 10.2105/AJPH.2014.302205.
[203] Annemarie Koster et al., "Association of Sedentary Time with Mortality Independent of Moderate to Vigorous Physical Activity," *PloS ONE* 7, no. 6 (2012): e37696, 2, https://doi.org/10.1371/journal.pone.0037696.
[204] Stéphanie Mombelli et al., "The Interplay Between Emotion Dysregulation and Repetitive Thoughts in Insomnia Disorder: The Impact of Worry, Rumination, and REM Sleep Instability," *Journal of Sleep Research* (2025): e70267, 5, https://doi.org/10.1111/jsr.70267.

Additionally, there is an overlooked paradox at work. Learning and cognitive engagement support better sleep quality, and high-quality sleep, in turn, supports memory consolidation and learning—the two reinforce one another.[205] By contrast, a lack of opportunities for learning leads to inactivity and boredom, which undermines the brain's ability to build sufficient sleep pressure during the day to make it ready for sleep at night; the lack of restorative sleep makes people tired during the day and less likely to participate in programming.

Under these conditions, sleep loss is not an individual condition. Rather, it is the outcome of days structured around inactivity, weakening the cues that distinguish day from night and the pressure that would otherwise build during the day to support restorative sleep at night.

c. Nutritionally inadequate and poorly timed meals

What and when people eat also play a meaningful role in how well they sleep. Sleep researchers increasingly emphasize that nutrition and sleep are tightly linked through shared metabolic and circadian pathways. Regular meals that provide adequate calories, protein, and micronutrients help stabilize blood glucose, support melatonin production, and reinforce the body's internal clock.[206] Eating patterns that are predictable and aligned with the day-night cycle support deeper, more consolidated sleep, while irregular timing, hunger, or highly processed foods are associated with lighter sleep, more nighttime awakenings, and greater daytime fatigue.[207] In short, nourishment is one of the mechanisms through which the body prepares itself for restorative sleep.

Meals in prisons and jails are rarely made with sleep—or health generally—in mind. They are often nutritionally inadequate, heavily processed, and served on schedules that conflict with basic circadian rhythms. Food served in prison is typically high in refined carbohydrates, sodium, and sugar, but low in fresh fruits, vegetables, fiber, and protein.[208] In a survey of people incarcerated in the D.C. jail system, a majority reported that highly processed food is served in excess, while fresh and healthy produce is rare.[209] These nutritional profiles are associated not only with chronic disease but also with poorer sleep quality and greater sleep fragmentation.[210] At the same time, chronic sleep loss alters appetite-regulating hormones, increasing cravings for energy-dense foods and creating a cycle in which poor sleep and poor diet reinforce one

[205] Susanne Diekelmann and Jan Born, "The Memory Function of Sleep," *Nature Reviews Neuroscience* 11 (2010): 114, https://doi.org/10.1038/nrn2762.
[206] Faten M. Zuraikat et al., "Sleep and Diet: Mounting Evidence of a Cyclical Relationship," *Annual Review of Nutrition* 41 (2021): 309, https://doi.org/10.1146/annurev-nutr-120420-021719.
[207] Gregory D. M. Potter et al., "Circadian Rhythm and Sleep Disruption: Causes, Metabolic Consequences, and Countermeasures," *Endocrine Reviews* 37, no. 6 (2016): 585, https://doi.org/10.1210/er.2016-1083.
[208] Leslie Soble, Kathryn Stroud, and Marika Weinstein, *Eating behind Bars: Ending the Hidden Punishment of Food in Prison*, (Impact Justice, 2020), 6, impactjustice.org/impact/food-in-prison/#report.
[209] Daniel Rosen, "'We're Hungry in Here': New Report Shines a Light on Rampant Hunger, Food Waste, and Unsafe Eating Conditions in D.C.'s Jails," DC Greens, November 6, 2023, https://dcgreens.org/were-hungry-in-here-new-report-shines-a-light-on-rampant-hunger-food-waste-and-unsafe-eating-conditions-in-d-c-s-jails/.
[210] Dashti et al., "Short Sleep Duration and Dietary Intake: Epidemiologic Evidence, Mechanisms, and Health Implications," *Advances in Nutrition* 6, no. 6 (2015): 648, https://doi.org/10.3945/an.115.008623.

another.[211] In prisons and jails, where people cannot choose alternative foods or adjust their diets, this cycle is especially difficult to escape. As a result, nutritionally poor prison diets actively undermine the body's ability to achieve restorative sleep.

Source: New Jersey Office of the Corrections Ombudsperson, photographs of food served in a New Jersey prison, email to authors, August 17, 2023.

A lack of nutritious foods also contributes to nighttime hunger pains. A landmark study on food in prison found that nearly everyone surveyed (94 % of respondents) reported they could not eat enough at meals to feel full, and 93% said they were hungry between meals.[212] Survey respondents described a "constant hunger gnawing at you" and the irritability and distress that accompany it—what some referred to as "hanger."[213] Chronic hunger activates stress pathways, making it difficult for the body to relax into sleep.

For those who can afford commissary, nighttime hunger is sometimes managed by purchasing packaged snacks. But these foods are typically calorie-dense, highly processed, and high in sugar or sodium, offering little nutritional value.[214] For indigent incarcerated people, even this option is unavailable, leaving hunger as an unmitigated feature of nights in prison. The resulting food insecurity at night keeps the body in a state of alertness rather than recovery.

Meal timing further disrupts the sleep-wake cycle. In many prisons, dinner is served in the mid-afternoon—as early as 3:00 p.m. or 4:00 p.m.—followed by a long overnight gap before breakfast, which may arrive during the very early morning hours.[215] Sleep research shows that going to bed hungry can delay sleep onset and increase nighttime awakenings, while eating

[211] Spiegel, Leproult, and Van Cauter, "Impact of Sleep Debt," 1435.
[212] Soble, Stroud, and Weinstein, "Eating Behind Bars," 14.
[213] Soble, Stroud, and Weinstein, "Eating Behind Bars," 15.
[214] Soble, Stroud, and Weinstein, "Eating Behind Bars," 16.
[215] Pitcher, "Some Texas Prisoners."

large meals very late or very early can interfere with melatonin release and circadian alignment.[216] These schedules place incarcerated people in direct conflict with the physiological conditions needed for sustained, restorative sleep.

The stress associated with food insecurity also matters. Anxiety about whether food will be sufficient or palatable the next day activates stress responses that interfere with the body's ability to wind down at night. Incarcerated people routinely describe food as a source of tension rather than nourishment—something to ration, trade, or tolerate.[217] When food becomes a source of stress, sleep becomes lighter, more fragmented, and less restorative.

When meals are nutritionally poor and mistimed, they do more than compromise physical health. They actively interfere with the body's ability to prepare for and sustain restorative sleep.

d. Use of lockdowns and restricted housing

Lockdowns and restricted housing profoundly alter how time is structured during the day, and in doing so, disrupt the biological processes that support restorative sleep at night. Sleep researchers emphasize that healthy sleep depends on clear 24-hour cues that distinguish day from night, activity from rest, and stimulation from quiet.[218] When these cues are disrupted, the brain struggles to regulate the sleep-wake cycle, leading to lighter, more fragmented, and less restorative sleep.[219] In this way, extended daytime confinement directly undermines the body's ability to sleep well at night.

Nowhere are these effects more visible than in restricted housing units in prisons and jails. People held in these units typically spend 22 to 24 hours a day alone in a small cell, with minimal movement, limited social contact, and little exposure to natural light.[220] Formerly incarcerated people who have been in restricted housing describe an environment where days feel indistinguishable from nights, and the body never receives a clear signal that it is time to rest.[221] Constant illumination, long hours of inactivity, and the absence of meaningful daytime engagement leave people exhausted but unable to sleep deeply.

Sleep science helps explain why these conditions are so destabilizing. Extended confinement creates what clinicians describe as a "bed-centric" environment: the same surface is used for sleeping, sitting, eating, and passing time.[222] Sleep medicine has long warned against this pattern, because spending prolonged periods in bed can promote daytime napping, which

[216] Carlos A. Crispim et al., "Relationship Between Food Intake and Sleep Patterns in Healthy Individuals," *Journal of Clinical Sleep Medicine* 7 (2011): 659, https://doi.org/10.5664/jcsm.1476.
[217] Soble, Stroud, and Weinstein, "Eating Behind Bars," 49.
[218] Torhild T. Pedersen et al., "Sleep Homeostasis and Night Work: A Polysomnographic Study of Daytime Sleep Following Three Consecutive Simulated Night Shifts," *Nature and Science of Sleep* 14 (2022): 244, https://doi.org/10.2147/NSS.S339639.
[219] Pedersen, et al., "Sleep Homeostasis and Night Work," 244.
[220] Cloud et al., "Public Health and Solitary Confinement," 18.
[221] Heffernan and Blakinger, "'Sleep Don't Come.'"
[222] Cloud et al., "Public Health and Solitary Confinement," 19.

reduces sleep pressure and weakens the brain's association between bed and sleep.[223] When people are forced to remain in their cells for most of the day, lying on the bed becomes unavoidable, making it harder for the brain to transition into consolidated sleep at night.

Restricted housing also deprives people of environmental cues that help align circadian rhythms. Natural light—particularly the daily cycle of blue-wavelength light—is one of the strongest signals regulating the internal body clock.[224] In solitary confinement and similar units, exposure to daylight is minimal or absent, while artificial lighting may remain on for much of the day and night. Without consistent exposure to natural light during the day and darkness at night, circadian rhythms drift, delaying sleep onset and reducing time spent in deep and REM sleep.[225] The absence of daytime cues undermines restorative sleep at night.

> "I would see people who were in the mental health unit...who were clearly psychotic, who were held in restrictive housing for months and months, who had not seen the sun for that whole time. People were being held for days in these safety cells that had no sink, no toilets, no bed. [S]o you go to the bathroom, and you eat on the floor with your hands, and you sleep there."
>
> **— Kara Janssen, plaintiffs' attorney, Babu v. Alameda County**
>
> **Source:** Lisa Fernandez and Alex Savidge, "Santa Rita Jail Making 'Excellent Strides' After Years of Troubles," KTVU Fox 2, February 11, 2025, https://www.ktvu.com/news/santa-rita-jail-making-excellent-strides-after-years-troubles.

Prolonged inactivity and social isolation further compound these effects. Research shows that isolation alters stress-hormone regulation, elevates nighttime cortisol, and interferes with the normal drop in physiological arousal that precedes sleep.[226] People in these conditions often report racing thoughts, heightened vigilance, and shallow, fragmented sleep marked by frequent awakenings.[227] The result is a state of chronic fatigue without recovery—a hallmark of sleep disrupted by confinement rather than by short-term stressors.

Prison lockdowns replicate many of these same dynamics on a broader scale. When facilities enter lockdown—whether due to violence, contraband searches, or staffing shortages, as is the case at many prisons and jails —incarcerated people are confined to their cells for up to 23 hours

[223] Cloud et al., "Public Health and Solitary Confinement," 19.
[224] National Toxicology Program, *NTP Cancer Hazard Assessment Report*, 11.
[225] Peter Meerlo, Andrea Sgoifo, and Deborah Suchecki, "Restricted and Disrupted Sleep: Effects on Autonomic Function, Neuroendocrine Stress Systems and Stress Responsivity," *Sleep Medicine Reviews* 12, no. 3 (2008): 198, https://doi.org/10.1016/j.smrv.2007.07.007.
[226] Louise C. Hawkley et al., "Effects of Social Isolation on Glucocorticoid Regulation in Social Mammals," *Hormones and Behavior* 62, no. 3 (2012): 314, https://doi.org/10.1016/j.yhbeh.2012.05.011.
[227] Bernice S. Elger, "Prison Life: Television, Sports, Work, Stress and Insomnia in a Remand Prison." *International Journal of Law and Psychiatry* 32, no. 2 (2009): 78, https://doi.org/10.1016/j.ijlp.2009.01.001.

a day, often for days or weeks at a time.[228] Meals are delivered to cell doors, programming is suspended, and access to recreation and social interaction is cut off. During lockdowns, incarcerated people describe days spent sitting or lying on their bunks with little physical movement and few mental outlets. The loss of daylight exposure, physical activity, and structured engagement blunts sleep pressure during the day while intensifying restlessness at night.[229] Even when people feel physically exhausted, the body remains poorly prepared for deep sleep because the signals that normally build up across an active day never fully materialize.

The combined effects of extended confinement, inactivity, social isolation, disrupted light exposure, and environmental monotony create a self-reinforcing cycle. Long, inactive days undermine sleep at night, and poor sleep makes the long days of confinement harder to tolerate. When people are confined to small spaces for nearly the entire day, deprived of meaningful activity, and denied clear signals of time passing, achieving restorative sleep becomes physiologically difficult.

Understanding sleep loss as a consequence of how time is structured during the day is essential because it clarifies why meaningful improvements in sleep will require changes to daily routines, access to activity and nourishment, and limits on prolonged confinement, not simply quieter nights or darker cells.

Together, these factors show that sleep loss in prisons and jails is not the product of a single condition or an unfortunate side effect of confinement—it is the cumulative result of how prisons and jails are built, operated, and structured throughout a full day and night. Poor physical sleeping conditions, unsafe temperatures, crowded and unsafe sleeping arrangements, and persistent fear undermine the body's ability to relax at night. Operational practices, including early wake times, frequent nighttime counts, excessive lighting, and constant noise, fragment sleep and override the body's natural rhythms. Daytime conditions then compound the problem, as limited physical activity, inadequate nutrition, lack of meaningful programming, and prolonged confinement prevent the buildup of healthy sleep pressure and disrupt circadian regulation. Each of these factors alone interferes with restorative sleep, but together, they create

Together, these factors show that sleep loss in prisons and jails is not the product of a single condition or an unfortunate side effect of confinement—it is the cumulative result of how prisons and jails are built, operated, and structured throughout a full day and night.

[228] Silja J. A. Talvi, "Prison Lockdowns Are Becoming More Frequent and More Brutal Across the U.S," *Truthout*, February 6, 2024, https://truthout.org/articles/prison-lockdowns-are-becoming-more-frequent-and-more-brutal-across-the-us/.
[229] Steve Brooks, "The Benefits of Sports After COVID-19," *Prison Journalism Project*, October 7, 2021, https://prisonjournalismproject.org/2021/10/07/the-benefits-of-sports-after-covid-19/.

an environment in which chronic sleep disruption is a predictable—but not necessary—feature of incarceration. Recognizing sleep loss as a structural outcome of prison conditions is critical because it shifts the focus from individual treatment to systemic changes to facility conditions and operations.

VII. Correctional Standards Addressing Sleep

Although prisons and jails in the United States are not uniformly required to comply with international or professional correctional standards, several widely recognized frameworks include provisions that directly affect incarcerated people's ability to obtain restorative sleep. These standards serve as guiding documents that reflect professional consensus on the minimum conditions necessary for health, safety, and human dignity. Notably, many align with the environmental and operational factors identified in this report as essential for healthy sleep.

United Nations Standard Minimum Rules for the Treatment of Prisoners (Nelson Mandela Rules)[230]

Sleeping accommodation:

- **Rule 12: Single-occupancy cells by night. Housing assignments should ensure prisoners can safely associate with one another.**
  The Mandela Rules provide that prisoners should, where possible, occupy single cells at night. Single-occupancy sleeping arrangements reduce noise, movement-related disturbance, and fear—factors that directly affect sleep continuity. Additionally, housing decisions should promote safety and compatibility. In shared sleeping environments, this includes assigning individuals to live with others who can safely and appropriately coexist. Reducing interpersonal conflict and fear supports psychological conditions necessary for restorative sleep.

- **Rule 13: Meet all requirements of health, including climate, air flow, floor space, and lighting.**
  Sleeping accommodations must meet health standards, including adequate ventilation, temperature control, sufficient floor space, and appropriate lighting—all of which directly influence sleep quality.

- **Rule 14: Maximize natural lighting; artificial lighting should not cause injury to eyesight.**
  Sleeping areas should be designed to allow sufficient natural light and airflow, while ensuring that artificial lighting is safe and not harmful. Access to natural light during the day and safe artificial lighting at night support circadian rhythms while minimizing sleep disruption and eyestrain.

[230] United Nations General Assembly, "United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules): Resolution / Adopted by the General Assembly," A/RES/70/175 (December 17, 2015), https://digitallibrary.un.org/record/816764.

Bed and bedding:

- Rule 21: Provide prisoners with a separate and sufficient bed and bedding, kept in good order and clean.
  Each prisoner should have an individual bed with clean, adequate bedding. Proper bedding reduces discomfort, nighttime awakenings, and exposure to unsanitary conditions that undermine sleep.

Food:

- Rule 22: Provide prisoners with meals at regular times and of sufficient nutritional value.
  Prisoners should be provided with meals at regular intervals and of sufficient nutritional quality to maintain health. Consistent meal timing and adequate nutrition help regulate metabolic processes and reduce nighttime hunger, both of which influence the body's ability to fall and stay asleep.

Physical activity:

- Rule 23: Provide prisoners with access to physical activity.
  Prisoners should have regular access to physical activity, including time outdoors where possible. Daily movement and exposure to natural light help regulate circadian rhythms and build sleep pressure, both of which are essential for consolidated, restorative sleep.

Library:

- Rule 64: Provide prisoners with access to reading materials.
  Facilities should provide access to books and encourage their use. Opportunities for reading and intellectual engagement support structured daytime activity, which helps regulate daily rhythms and reduces the likelihood of excessive daytime sleep that can interfere with sleep at night.

Work:

- Rule 96: Provide prisoners with opportunities for work and purposeful activity.
  Prisoners should have access to meaningful work and opportunities to remain actively engaged throughout the day. Regular, structured activity helps establish routine, reduces idleness, and supports the buildup of sleep pressure necessary for nighttime rest.

Education and recreation:

- **Rules 104–105: Provide prisoners with access to education and recreational activity.** Prisoners should have access to education, as well as recreational and cultural programming that supports mental and physical well-being. Structured programming and engagement during the day reinforce circadian rhythms, reduce inactivity, and promote more stable, restorative sleep.

American Bar Association (ABA) Criminal Justice Standards on the Treatment of Prisoners[231]

Standard 23-3.3: Housing areas

- **Single-occupancy cells should be the preferred form of housing.** Private sleeping space should be the preferred arrangement, reflecting concerns about safety, privacy, and environmental stability.

- **In dormitories or multiple-occupancy cells, sufficient staffing, supervision, privacy, and personal space should be provided.** Where shared housing is used, adequate supervision and space are required to reduce tension and conflict—conditions that directly affect nighttime safety and sleep.

- **Provide each prisoner with a bed and mattress off the floor.** Floor sleeping is inconsistent with professional standards and with contemporary Western views about human decency. Raised beds and mattresses reduce exposure to drafts, pests, and moisture, and provide the physical support necessary for sustained sleep.

Standard 23-3.4: Healthful food

- **Provide adequate, nutritious food at appropriate times and under sanitary conditions.** Food should support health and be provided at appropriate times during the day. Regular, sufficient meals help stabilize metabolism and reduce hunger-related sleep disruptions, while predictable meal timing supports circadian rhythms and more consistent sleep–wake patterns.

[231] American Bar Association, *ABA Standards for Criminal Justice: Treatment of Prisoners*, 3rd ed. (Washington, DC: American Bar Association, 2011), https://www.americanbar.org/groups/criminal_justice/resources/standards/treatment-of-prisoners/.

Standard 23-3.6: Recreation and out-of-cell time

- Provide daily opportunities for out-of-cell time, exercise, and social interaction.
  Minimize prolonged confinement in cells and ensure access to recreation and movement. Physical activity, social engagement, and time out of cells help build sleep pressure during the day, making it easier to fall asleep and remain asleep at night.
- Encourage congregate activity, including shared meals where appropriate.
  Access to group settings promotes routine social interaction, which contributes to more stable day–night rhythms that support restorative sleep.

Standard 23-3.7: Restrictions relating to programming

- Ensure that basic environmental and health conditions are maintained, regardless of disciplinary status.
  Restrictions should not compromise conditions such as lighting, noise levels, temperature, ventilation, access to health care, or the opportunity to sleep. These protections reinforce that adequate sleep conditions are a baseline requirement, not a privilege that can be taken away.

Standard 23-3.8: Segregated housing

- Avoid extreme isolation and provide meaningful activity and human interaction.
  Conditions of isolation are characterized by idleness, minimal out-of-cell time, and lack of stimulation. Instead, corrections agencies should provide access to programming, exercise, and regular interaction with staff and others. Activities and human interactions cue our biological clock and reduce psychological stress and inactivity, which can interfere with sleep.

Standard 23-3.9: Conditions during lockdown

- Limit lockdowns and maintain access to basic services and activity.
  Lockdowns should be used sparingly and should not eliminate access to essential services, movement, or programming beyond what is necessary. Preserving some level of activity and routine helps prevent prolonged inactivity, stress, and disrupted daily rhythms, which undermine sleep.

Standard 23-5.1: Personal security and protection from harm

- Protect prisoners from violence, harassment, and abuse.
  Ensure the physical and psychological safety of all prisoners. A safe environment reduces fear and hypervigilance—two of the most significant barriers to falling and staying asleep in custodial settings.

Standard 23-7.1: Respect for prisoners

- Treat prisoners with dignity and prevent harassment or discrimination.
  Respectful treatment and the absence of harassment contribute to a more stable and predictable environment. Lower stress and reduced interpersonal conflict support emotional regulation and make it easier to initiate and maintain sleep.

Standard 23-7.3: Religious freedom

- Allow prisoners to engage in religious practices.
  Supporting religious practice can reduce stress and provide a sense of stability and meaning. It also creates structured opportunities for daytime activity, which help regulate daily rhythms and build the conditions necessary for restorative sleep.

Standard 23-7.5: Communication and expression

- Provide opportunities for communication, creative expression, and access to information.
  Access to reading materials, media, and creative outlets supports cognitive engagement and emotional processing. These forms of structured daytime activity reduce idleness and rumination, both of which can interfere with sleep at night.

Standard 23-8.2: Rehabilitative programs

- Ensure access to education, treatment, and skill-building activities.
  Prisoners should be engaged in constructive activities throughout their confinement. Regular participation in programming supports cognitive engagement, reduces inactivity, and strengthens daily routines that promote healthier sleep–wake cycles.

Standard 23-8.4: Work programs

- Provide opportunities for regular work or equivalent structured activity.
  Full-time work or comparable programming helps structure the day, increase physical and mental activity, and reinforce routine. These conditions build sleep pressure and support more consistent and restorative sleep at night.

American Correctional Association (ACA) Standards[232]

Standard 2C-03 (formerly 4-4134): Cell Furnishings
Each incarcerated person should be provided:

- A sleeping surface and mattress at least 12 inches off the floor.
  Elevating sleeping surfaces supports sanitation, comfort, and stability, reducing involuntary awakenings caused by environmental exposure or discomfort.

- A writing surface and an area to sit.
  Providing structured space for daytime activity helps reduce the use of beds for prolonged daytime sitting or lying down, supporting healthier sleep–wake patterns.

- Storage for personal items and adequate space for clothing and belongings.
  Organized personal space contributes to predictability and order within the sleeping area, reducing environmental stressors that can interfere with rest.

Standards 2D-03 – 2D-06 (formerly 4-4147 through 4-4149): Natural Lighting

- Provide access to natural light in living and common areas.
  Access to natural light supports circadian rhythms by reinforcing the distinction between day and night. Exposure to daylight during waking hours is one of the most important external cues for regulating sleep timing and improving sleep quality.

Standard 2D-07 (formerly 4-4150): Noise

- Maintain noise levels within defined limits.
  The ACA sets maximum noise thresholds for housing units, recognizing that excessive noise disrupts concentration and rest. Lower ambient noise reduces nighttime awakenings and allows for more continuous and restorative sleep.

Standard 2D-10 (formerly 4-4153): Temperature

- Maintain indoor temperatures within a comfortable range.
  Temperature regulation is identified as a core environmental condition. Maintaining a stable and moderate temperature supports the body's ability to fall asleep and remain asleep.

[232] American Correctional Association, *Standards for Adult Correctional Institutions*, 5th ed. (Alexandria, VA: American Correctional Association, 2012), https://www.aca.org/standards/standards-and-committees.

Standard 2E-01 through -02 (formerly 4-4154): Exercise and Recreation

- Provide daily opportunities for physical activity, including outdoor exercise.
  Regular access to exercise—particularly outdoors—supports physical exertion, exposure to natural light, and daily routine. These factors build sleep pressure and help regulate circadian rhythms, making sleep more consolidated and restorative.

Standard 3D-04 – 3D-05 (formerly 4-4277-4-4278): Access to Programs and Services

- Ensure equitable access to programming and services.
  Incarcerated people should have access to programs and services. Regular participation in programming promotes cognitive engagement, social interaction, and structured daily routines—all of which support healthier sleep patterns.

Standard 4A-24 (formerly 4-4270), 4B-05, 4B-24, 4B-26: Exercise Outside of Cell for Special Management Housing Units

- Provide exercise, out-of-cell time, and access to programming in restrictive settings.
  Even in more controlled housing environments, daily exercise and access to programs and services should be provided to incarcerated people. These provisions reduce prolonged inactivity, isolation, and psychological stress—conditions that are strongly associated with sleep disruption.

Standard 5C-04 (formerly 4-4316) and 5C-16 (formerly 4-4328): Dietary Allowances and meal timing

- Provide nutritionally adequate meals at regular intervals.
  Meals should meet nutritional standards and be served on a consistent schedule, with limits on the time between meals. Regular meal timing helps stabilize metabolism and supports circadian rhythms, reducing sleep disruption caused by hunger or irregular schedules.

Standard 5D-06 (formerly 4-4334) and 5D-12 (formerly 4-4340): Clothing and bedding Supplies

- Provide clean, sufficient bedding and ensure regular replacement.
  Access to clean and adequate bedding supports hygiene, comfort, and physical stability during sleep. Regular laundering and replacement reduce discomfort and environmental factors that can lead to nighttime awakenings.

Standards 5E-01—5E-11 (formerly 4-4428 and 4-4429): Social Services and counseling

- Provide access to counseling, treatment, and supportive services.
  Mental health care, substance use treatment, and counseling services address underlying conditions such as anxiety, trauma, and stress, all of which are closely linked to sleep disruption. These services also provide structured daytime engagement that supports healthier sleep.

Standard 5F-01 (formerly 4-4442): Release Preparation

- Provide structured preparation for reentry.
  Participation in release planning and related programming promotes routine, engagement, and future orientation. These structured activities reduce idleness and support the development of stable daily rhythms that are conducive to sleep.

Standards 7A-03(formerly 4-4451) -- 7A-06 (formerly 4-4454): Work Opportunities

- Provide meaningful work opportunities that approximate a standard workday.
  Regular work assignments structure the day, increase physical and cognitive activity, and reinforce consistent daily routines. These factors build sleep pressure and contribute to more predictable and restorative sleep.

Standards 7B-01 (formerly 4-4464: Education programs

- Provide access to comprehensive educational programming.
  Educational activities engage attention, reduce idleness, and create periods of cognitive engagement during the day. This engagement supports sleep by increasing mental fatigue and reinforcing daily structure.

Standard 7C-01, 7C-04 -- 7C-06 (formerly 4-4481): Recreation and leisure activities

- Provide access to recreational, creative, and group activities.
  Recreation and leisure programming—including physical activity, arts, and group engagement—support both physical exertion and cognitive regulation. These activities help reduce stress and contribute to the buildup of sleep pressure necessary for restorative sleep.

Standard 7E-06 (formerly 4-4510): Library services

- Provide regular access to reading materials and library services.
  Access to books and other materials supports cognitive engagement and structured activity. Reading can also serve as a calming pre-sleep routine, helping individuals transition into sleep.

While U.S. prisons and jails are not mandated to adhere to these standards, they reflect longstanding professional and international consensus about the minimum conditions required to protect the health and respect the human dignity of people in custody. Importantly, many of these provisions—single sleeping spaces, adequate lighting, climate control, raised beds, clean bedding, and sufficient personal space—directly correspond to the conditions and operational factors that sleep science identifies as necessary for restorative sleep.

The fact that many prisons and jails do not fully meet these standards underscores that chronic sleep disruption in prisons and jails is not inevitable. It is often the result of operational choices that fall short of established guidance about safe and humane confinement conditions.

VIII. Are Better Sleep Practices in Prison and Jail Possible?

Some prisons and local jails have begun to take modest but meaningful steps to reduce the sleep harms documented above. In many cases, these reforms were not undertaken specifically to improve sleep. Even so, they demonstrate two important points. First, many of the most significant drivers of sleep disruption stem from operational choices rather than immutable security needs. Second, when agencies change their practices—even for reasons unrelated to sleep—sleep conditions can and do improve. The examples below highlight concrete practices implemented in prisons and jails—what changed, who initiated the change, and how those changes reduced sleep disruptions.

Improving mattresses and bedding

A small number of agencies have addressed sleep disruption by improving mattress quality and bedding. In 2020, Washington State's Office of the Corrections Ombuds issued a system-wide report recommending investment in higher-density, thicker mattresses, tracking mattress age, rotating out deteriorated mattresses and bedding with newer ones that were available at comparable cost, and prioritizing replacements for older adults and people with medical needs who were experiencing pain and frequent awakenings at night.[233] In August 2023, the California Department of Corrections and Rehabilitation launched a pilot program testing three-inch foam mattresses at four facilities, citing potential benefits for sleep, health, and behavior.[234] Although often framed in terms of safety or liability, these improvements carry clear secondary benefits for sleep by reducing pain, discomfort, and nighttime movement.

Targeted efforts to improve mattresses in specific units have also emerged. In 2025, the Middlesex Sheriff's Office launched a new Older Adult Re-Entry unit at the Middlesex Jail & House of Correction in Massachusetts for incarcerated people aged 55 and older. The unit includes thicker mattresses placed on higher bed frames, making it easier for older adults to get in and out of bed safely.[235] While the initiative was designed to address aging-related needs more broadly, program staff noted that the improved mattresses were one factor contributing to participants' higher daytime energy levels . While it is still too early to determine outcomes, a staff member noted specifically that the mattresses, in part, were one reason why incarcerated people living in the unit seemed to have more energy during the day.[236] More supportive

[233] Washington State Office of the Corrections Ombuds, "Systemic Issue Report," 6.
[234] Former Life Without Parole (LWOP) and Advocacy Team, "California Model, Foam Mattress Trial Program," Facebook, May 19, 2023, https://www.facebook.com/groups/791730884804818/posts/1233010257343543/.
[235] Peter Currier, "Officials Highlight Early Success of New Middlesex HOC Unit Designed for Older Inmates," *The Sun*, March 21, 2025, https://www.lowellsun.com/2025/03/21/officials-highlight-early-success-of-new-middlesex-hoc-unit-designed-for-older-inmates/.
[236] Currier, "Officials Highlight Early Success."

mattresses and beds that present less of a safety risk make it easier to fall asleep and stay asleep at night.

These examples demonstrate that inadequate mattresses and bedding are a remediable condition. Improving their quality can reduce pain, nighttime movement, and awakenings, making sustained sleep more attainable.

Adjusting schedules to extend and protect sleep

One of the most direct ways facilities have reduced sleep disruption is by adjusting overnight schedules that routinely wake people, such as early-morning pill lines, early breakfast, counts, and other disruptive procedures. For example, following a preliminary injunction in *Upshaw v. Alameda County*, the Alameda County Sheriff's Office was ordered to modify overnight routines at the Santa Rita Jail in Alameda County, California, by delaying pill call and breakfast by an hour and by prohibiting facility-wide announcements, making repairs, and conducting maintenance—absent an emergency—during a designated seven-hour sleep period.[237]

In response to this order, the agency implemented a series of coordinated schedule changes to extend and protect overnight sleep. It delayed early-morning medication lines and breakfast for women in custody by one hour on weekdays and two hours on weekends and holidays.[238] The agency also established consistent lights-off periods from 11:00 p.m. to 5:00 a.m. on weekdays and 11:00 p.m. to 6:00 a.m. on weekends. This six- to seven-hour period provided a longer window for sleep, consistent with guidance from sleep experts on the number of hours required for restorative sleep. Medication distribution was shifted to coincide with these later wake-up times, reducing involuntary awakenings and helping to preserve a consolidated sleep period.

These changes illustrate how scheduling adjustments can meaningfully increase sleep. While implementation was inconsistent at first, women in custody reported that even modest increases in uninterrupted sleep and fewer forced awakenings had a noticeable effect on their well-being, alertness, and ability to function during the day.[239] This example demonstrates that schedules long-treated as fixed can be restructured to better align with circadian rhythms while preserving institutional order.

Similar adjustments in other jurisdictions reinforce this point. In 2022, the Texas Department of Criminal Justice (TDCJ) reduced its daily count schedule from eight to six statewide. According to the agency, the change increased operational efficiency, eased staffing pressures, and enabled incarcerated people to get more uninterrupted sleep.[240] Following public scrutiny and

[237] Heffernan and Blakinger, "'Sleep Don't Come.'"
[238] Maria Dinzeo, "Jailers Still Interrupting Sleep Despite Order, Bay Area Inmates Tell Judge," *Courthouse News Service*, September 12, 2019, https://www.courthousenews.com/jailers-still-interrupting-sleep-bay-area-inmates-tell-judge/.
[239] Dinzeo, "Jailers Still Interrupting Sleep."
[240] Heffernan and Blakinger, "'Sleep Don't Come.'"

complaints from incarcerated people at Pelican Bay State Prison in California, staff were instructed to reduce welfare checks in certain secure housing units from every thirty minutes to once per hour, cutting the number of forced disruptions in half while maintaining safety monitoring.[241]

These examples show that many sources of nighttime disruption are not fixed requirements, but adjustable operational practices. Aligning schedules with sleep needs by reducing the causes of involuntary awakenings can improve sleep without compromising safety or institutional order.

Modifying nighttime count practices

Several facilities have also addressed sleep disruption by changing how staff conduct overnight counts and welfare checks. At Pelican Bay State Prison, officials agreed to quieter nighttime practices, including limiting unnecessary door slamming during counts, limiting loud verbal commands, muting electronic cell-check systems, and walking more quietly on housing units during rounds.[242] Staff were also directed to minimize unnecessary flashlight use. These changes were reported to reduce the frequency and intensity of sleep-disrupting disturbances.

Similar changes in other jurisdictions further demonstrate how both noise and lighting during overnight counts can be adjusted without compromising safety. Operational changes at Alameda County's Santa Rita Jail included changes to the use of lighting and noise during overnight counts. Staff could continue to use flashlights when visibility was insufficient to confirm safety, but people who were already visible should not be subjected to repeated banging, shouting, or forced awakenings.[243] To further reduce disruption, the court encouraged the use of sleep masks and earplugs for people whose visibility allowed for quieter observation—an approach that reduced involuntary awakenings without limiting staff discretion when safety concerns arose.[244] These restrictions were intended to reduce involuntary awakenings caused by light and noise during designated sleep periods, while preserving staff discretion to respond immediately when safety or medical needs arise.

These types of adjustments are operationally simple and low-cost, yet they reduce the micro-arousals caused by sudden noise and light exposure that fragment sleep during the night. Importantly, these examples demonstrate that nighttime counts can be conducted in ways that preserve safety while minimizing unnecessary sensory disruption and protecting sleep continuity.

[241] Associated Press, "'Keep It Down.'"
[242] Associated Press, "'Keep It Down.'"
[243] Christophi, "Judge Chastises Jail Officials."
[244] Christophi, "Judge Chastises Jail Officials."

Reducing continuous nighttime lighting in housing units

Some corrections agencies have addressed sleep disruption by modifying nighttime lighting in housing units. In 2022, the Texas Department of Criminal Justice reported that it transitioned to using low-level night lights, rather than full overhead lighting, during overnight counts and welfare checks.[245] The agency reported that this change was intended to reduce sleep interruptions while maintaining sufficient visibility for counts and welfare checks.[246]

Unlike flashlight use during counts, which produces intermittent disturbance, exposure to bright overhead lighting can suppress melatonin, disrupt circadian rhythms, and make it more difficult to fall and stay asleep.[247] Research in non-carceral settings demonstrates that blue and white light—like the fluorescent ceiling lights in most prisons—suppresses melatonin and disrupts circadian rhythms, while dimmer, warmer-spectrum lighting, especially red light, has a less disruptive effect on sleep.[248] At a hospital in Virginia, for example, administrators replaced recessed floodlights with red bulbs and equipped nurses with low-level red-light necklaces for overnight care. After the change, patients experienced fewer sleep disruptions while staff retained adequate visibility to perform their duties safely.[249] This model demonstrates that safety and sleep-supportive lighting are not mutually exclusive in congregate care settings.

Where full fixture replacement is not immediately feasible, agencies can implement low-cost interim solutions. In a British prison, staff and incarcerated people layered orange cellophane over fluorescent lights as a temporary solution to headaches and eyestrain caused by harsh lighting.[250] While not yet widespread in the U.S., these efforts suggest that lighting adjustments, such as shielding fixtures, using warmer bulbs, or limiting unnecessary illumination, can reduce circadian disruption while still allowing staff visibility. They also demonstrate that nighttime lighting is a modifiable condition, not a fixed feature of corrections environments.

Reducing noise in housing units

Some agencies have made physical modifications to reduce ambient noise, installing sound-absorbing panels mounted out of reach in housing units, which dampen echoes and reduce the

[245] Heffernan and Blakinger, "'Sleep Don't Come.'"
[246] Heffernan and Blakinger, "'Sleep Don't Come.'"
[247] Centers for Disease Control and Prevention, "The Color of the Light Affects the Circadian Rhythms," National Institute for Occupational Safety and Health, April 1, 2020, https://www.cdc.gov/niosh/emres/longhourstraining/color.html.
[248] Centers for Disease Control and Prevention, "Color of the Light."
[249] Christine P. Kueter, "Can Something as Simple as a Colored Bulb Promote Sleep in the Hospital?" *University of Virginia News*, October 19, 2018, https://news.virginia.edu/content/can-something-simple-colored-bulb-promote-sleep-hospital.
[250] Michaele Wynn-Jones, "'Life Under Fluorescent Light Is Harming Prisoners and Staff Alike,'" *The Guardian*, September 26, 2002, https://www.theguardian.com/society/2002/sep/26/publicvoices.

transmission of noise from doors, voices, and movement. The Maine Department of Corrections installed acoustic treatments as part of broader efforts to normalize housing environments.[251]

Renovation projects in some California prisons have incorporated architectural features intended to reduce noise in housing units. Sound-absorbing acoustic panels and other design elements have been installed at the Mule Creek Infill Complex in California to reduce reverberation in dormitory-style housing, improving overall sound conditions without altering security procedures.[252] While far from standard, these examples demonstrate that sleep considerations can be integrated into longer-term capital planning rather than addressed solely through short-term operational fixes.

Other agencies have implemented lower-cost operational strategies to reduce noise. For example, the Texas Department of Criminal Justice (TDCJ) provides incarcerated people with headphones to limit the impact of television noise in shared housing units.[253] Providing headphones to incarcerated people to wear at night could reduce ambient noise and improve their sleep.

Regulating facility temperature

Temperature is another area where litigation and advocacy have produced concrete changes tied explicitly to sleep and health. In Texas, a federal lawsuit challenging extreme heat conditions resulted in a settlement requiring the installation or expansion of air conditioning in one prison unit after evidence showed that extreme heat posed serious health risks.[254] Courts and advocates cited the inability to sleep in dangerously hot conditions as part of the documented harm. Subsequently, Texas began constructing thousands of air-conditioned "cool beds" and procuring additional climate-controlled housing units, signaling a shift toward treating temperature as an operational priority.[255] While not a direct sleep intervention, the cooler units will provide an environment more conducive to restorative sleep.

Other jurisdictions have also begun investing in temperature regulation. California announced a $38 million pilot project to test cooling strategies in housing units at three state prisons, reflecting growing recognition that temperature regulation is a safety and health issue rather

[251] Maine Department of Corrections, "The Maine Model of Corrections," presentation at the American Correctional Association Winter Conference, New Orleans, August 6, 2022, slide 16, https://www.maine.gov/corrections/sites/maine.gov.corrections/files/inline-files/MDOC%20-%20ACA%202022%20New%20Orleans%20-%20Maine%20Model%20of%20Correction%20%288.6.2022%29_0.pdf; "Eckel Panels Correct Facility Acoustics," *Facility Executive*, November 8, 2016, https://facilityexecutive.com/eckel-panels-correct-facility-acoustics/.

[252] "Eckel Panels Correct Facility Acoustics."

[253] Jay Goodman, "The Sweet Sound of Silence," *Texas Mexico Law*, July 10, 2020, https://texasmexicolaw.com/the-sweet-sound-of-silence/#.

[254] Banks, "Air Conditioning Could Extend."

[255] Watford, "Extreme Heat in Prisons."

than a matter of comfort.[256] In North Carolina, officials have committed to installing air conditioning in all 54 state prisons by 2026; as of the most recent reporting, the majority of facilities are fully or partially air-conditioned, with only a small number remaining without climate control.[257] Similar efforts have been reported in Louisiana and other southern states.[258]

Even states with milder climates have recognized the importance of temperature regulation during increasingly hot summers. Delaware's fiscal year 2026 capital budget, for example, includes dedicated funding to install air conditioning at one of its prisons.[259]

Sleep research consistently identifies the optimal nighttime temperature range as approximately 60-67 degrees Fahrenheit.[260] While many prisons lack air conditioning, Arkansas has maintained universal air conditioning across its prison system since 1970 and requires facilities to maintain indoor temperatures between 65 and 80 degrees.[261] Texas jail standards similarly require facilities to maintain temperatures between 65 and 85 degrees.[262] These examples demonstrate that when temperature is treated as a health and safety issue, agencies can make infrastructure and policy changes that materially improve conditions for restorative sleep.

Changing sleeping arrangements

Changes to sleeping arrangements, specifically reducing the use of bunk beds and increasing single-person sleeping spaces, have also improved sleep conditions. In 2021, in response to a reduction in the state prison population and social distancing requirements during the COVID-19 pandemic, the New York State Assembly passed a bill that Governor Hochul later signed into law that ended double-bunking in state medium security prisons, a measure that had the support of the state's corrections officer union. While the bill was not framed as a sleep intervention, legislators noted that the practice of double bunking raises the risk of conflict, making prisons less safe for incarcerated people and staff.[263] Reducing the fear and anxiety that stems from safety issues can help incarcerated people fall asleep and stay asleep.

Other prison agencies have expanded access to single-occupancy sleeping arrangements. At San Quentin Rehabilitation Center, the California Department of Corrections and Rehabilitation created an "Earned Living" housing unit composed entirely of single-person cells, and the

[256] Kuang, "California Prison Pilot Project."
[257] Watford, "Extreme Heat in Prisons."
[258] O'Donoghue, "Louisiana Prison Air Conditioning."
[259] Watford, "Extreme Heat in Prisons."
[260] Brock, "5 Simple Changes."
[261] Watford, "Extreme Heat in Prisons."
[262] 37 Tex. Admin. Code § 260.154 (1994) ("Temperature Control"), https://regulations.justia.com/states/texas/title-37/part-9/chapter-260/subchapter-b/section-260-154/.
[263] Joe Lotemplio, "NY Assembly Votes to End Prison Double Bunking," *Corrections 1*, June 20, 2021, https://www.corrections1.com/facility-design-and-operation/articles/ny-assembly-votes-to-end-prison-double-bunking-PpfrQiYHkGClDD82/.

agency has announced plans to expand access to single-cell housing across the facility.[264] The shift was motivated in part by San Francisco's District Attorney, Brooke Jenkins, whose interviews with incarcerated people at San Quentin over a two-year period inspired her to find a way to reduce stress, chaos, and fear—conditions that researchers identify as barriers to sleep.[265]

Providing more personal sleep space reduces noise, movement-related disturbances, and perceived threats, thereby supporting more stable, restorative sleep.

Increasing daily activities and exposure to natural light

Several prison systems have expanded programming, education, work, recreation, and outdoor access to reduce daytime idleness and excessive napping, both of which undermine nighttime sleep. Program expansions are frequently framed in terms of rehabilitation, but they also increase physical and cognitive activity during the day, strengthening sleep pressure and supporting more consolidated sleep at night. The Alameda County Sheriff's Office partnered with the Juilliard School to provide people in custody with musical education, offering structured creative engagement during the day.[266] The agency has also worked with trade unions and community organizations to connect people in custody who are preparing for release with job opportunities and housing support.[267] These collaborations helped expand programming cost-effectively, providing incarcerated people with more opportunities for daytime activities.

Exposure to natural light during the day is also a critical component of healthy sleep. Increasing exposure to natural light during the day further reinforces healthy sleep-wake cycles, improving mood, alertness, metabolism, and circadian alignment for nighttime sleep.[268] Some prison agencies have demonstrated how to incorporate access to natural light and physical activity into programming. At Oregon State Penitentiary, reforms led by the organization AMEND—which adapts Scandinavian correctional practices and works with U.S. prison agencies to implement them—included the creation of a healing garden designed to provide respite from concrete environments and reconnect people with natural surroundings. One incarcerated man who had spent most of the previous two decades in solitary confinement described walking on grass for the first time in 20 years.[269]

Other jurisdictions have taken similar steps by integrating outdoor activity into vocational programming. The Maine Department of Corrections, for example, partnered with a local

[264] Garcia, "Single-Cell Units."
[265] Garcia, "Single-Cell Units."
[266] Lisa Fernandez and Alex Savidge, "Santa Rita Jail Making 'Excellent Strides' After Years of Troubles," *KTVU Fox 2*, February 11, 2025, https://www.ktvu.com/news/santa-rita-jail-making-excellent-strides-after-years-troubles.
[267] Fernandez and Savidge, "Santa Rita Jail Making 'Excellent Strides.'"
[268] Christine Blume, Corrado Garbazza, and Manuel Spitschan, "Effects of Light on Human Circadian Rhythms, Sleep and Mood," *Somnologie* 23 (2019): 148, https://doi.org/ 10.1007/s11818-019-00215-x.
[269] Ariel Bleicher, "Norway's Humane Approach to Prisons Can Work Here, Too," *University of California San Francisco Magazine*, 2021, https://magazine.ucsf.edu/norways-humane-approach-prisons-can-work-here-too.

horticulturist to develop a prison garden where incarcerated people learn the science of growing food.[270] It also partnered with a local farmer to offer hands-on experience caring for horses at a farm located across from the state's primary prison, providing practical skills for people preparing for release. These programs expanded vocational training and created meaningful daytime activity without compromising security. They have an important secondary benefit too—they get incarcerated people outside, exposed to natural light, which is necessary for supporting circadian rhythm.

These examples demonstrate that increasing daytime activity and access to natural light advances broader institutional goals while also supporting healthier sleep-wake cycles.

Adjusting food quality

Food quality also impacts sleep. Facilities that operate on-site garden and culinary arts programs provide a useful model. In Maine, the agency paired its gardening program with a culinary arts program, bringing in a local chef to teach residents how to prepare meals using the fresh fruits and vegetables they cultivated. [271] Incarcerated people in Maine report feeling more satisfied after meals and experiencing less hunger overnight, reducing sleep disruption.[272] Improving the quality of food incarcerated people consume supports metabolic stability and reduces sleep disruption related to hunger.

Adapting Scandinavian practices

Underlying some of these reforms is a broader shift inspired by Scandinavian correctional practices and adapted for U.S. prison agencies through AMEND's work in California, Oregon, Washington, and North Dakota. These efforts are not attempts to replicate Norway's prison system, but to align practices in these state prisons with evidence-based principles emphasizing normalization, predictability, and humane daily routines.[273]

AMEND-supported reforms emphasize predictable schedules, normalized living environments, meaningful daytime activity, and calmer staff–resident interactions. Although not designed as sleep interventions, these changes directly address the conditions sleep science identifies as essential for restorative sleep: reduced nighttime fear and noise, clearer day–night cues, increased daytime engagement, and lower stress.[274]

[270] Soble, Stroud, and Weinstein, "Eating Behind Bars," 40.
[271] Soble, Stroud, and Weinstein, "Eating Behind Bars," 40.
[272] Soble, Stroud, and Weinstein, "Eating Behind Bars," 40.
[273] Bleicher, "Norway's Humane Approach."
[274] Bleicher, "Norway's Humane Approach."

Perhaps most consequential are changes in staff–resident relationships. With support from AMEND, prison staff in North Dakota, Oregon, Washington, and California have been trained in de-escalation, communication, and behavioral science report lower stress and fewer violent incidents, while incarcerated people spend more time out of their cells and engage in social activity. In these facilities, incarcerated people are referred to as "residents" rather than "inmates" or "convicts," and staff are trained to listen actively, communicate clearly, and de-escalate tension through conversation rather than commands or force.[275] Staff and residents are also encouraged to engage in routine, respectful interactions by talking, checking in, and building familiarity so that staff can anticipate conflict before it escalates.

The first evaluation of these methods found that assaults declined sharply, use-of-force incidents dropped dramatically, and time spent in solitary confinement was substantially reduced.[276] In Oregon, for example, assaults between residents and staff dropped by nearly 74 percent between 2016 and 2021, and staff use-of-force incidents in the Behavioral Health Unit declined by almost 86 percent.[277] North Dakota reported that assaults on staff fell by roughly 60 percent after implementing similar changes, alongside an 80 percent reduction in the use of solitary confinement.[278] These outcomes matter for sleep because fear, anxiety, and hypervigilance are among the strongest barriers to falling and staying asleep.

Staff report that these changes have fundamentally altered the tone of housing units. Staff describe gaining situational awareness and credibility by knowing the people in their care and being perceived as fair and consistent. As one staff member explained, incarcerated people recognize that staff cannot solve every problem, but when people feel heard and respected, conflicts, especially aggressive ones, are far less likely. [279] These relational shifts matter at night, when unresolved tension and fear often resurface as anxiety that disrupts sleep.

"A lot of guys in custody know you're not going to be able to solve all their problems, but as long as they feel like you care, that usually does a pretty good job of de-escalating the situation."

— David Jantz, Captain at Oregon Department of Corrections

Source: Victoria Colliver, "How Norway Is Helping to Restore Humanity Inside U.S. Prisons," *University of California San Francisco News*, September 5, 2023, https://www.ucsf.edu/news/2023/08/425946/how-norway-helping-restore-humanity-inside-us-prisons.

[275] Victoria Colliver, "How Norway Is Helping to Restore Humanity Inside U.S. Prisons," *University of California San Francisco News*, September 5, 2023, https://www.ucsf.edu/news/2023/08/425946/how-norway-helping-restore-humanity-inside-us-prisons.
[276] Cloud et al., "The Resource Team: A Case Study of a Solitary Confinement Reform in Oregon," *PLOS One* 18, no. 7 (2023): e0288187, 11, https://doi.org/10.1371/journal.pone.0288187.
[277] Colliver, "Norway and U.S. Prisons."
[278] Bleicher, "Norway's Humane Approach."
[279] Colliver, "Norway and U.S. Prisons."

Comparable shifts are underway in local jails. The Alameda County Sheriff's Office, for example, has retrained jail staff to prioritize patience, communication, and crisis response over punitive reactions. Deputies now participate in daily interdisciplinary "huddles" with behavioral health staff to identify people who may be struggling and to plan de-escalation strategies before problems arise.[280] When a uniformed deputy appears to be escalating a situation, mental health clinicians are brought in to take the lead. Since implementing these changes, Alameda County has reported a substantial reduction in the use of solitary confinement.

What these examples show (and what they do not)

These examples show that meaningful improvements to sleep are possible without wholesale system redesign: schedule changes, quieter night procedures, better bedding, targeted climate control, and construction choices all move the needle. Yet they also illustrate important limits. Many of these reforms were relatively low-cost, rather than structural changes involving facility design or large-scale capital investment. With the exception of temperature regulation in some jurisdictions, few examples reflect systemwide infrastructure reform.

In addition, most of these changes were not driven by legislation or comprehensive policy reform. Instead, many emerged in response to litigation, media attention, or advocacy. Many of the changes are partial, temporary, or limited to specific facilities.

Improving sleep sustainably requires more than environmental and operational changes alone. Many incarcerated people experience sleep disruption related to underlying medical, mental health, or trauma-related conditions. Addressing sleep in prisons and jails, therefore, also requires access to adequate medical and behavioral health care alongside changes to the physical environment and daily routines.

[280] Fernandez and Savidge, "Santa Rita Jail Making 'Excellent Strides.'"

IX. Recommendations

Routine operations practices in prisons and jails across the country play a significant role in shaping whether incarcerated people can sleep at all and whether that sleep is restorative or chronically disrupted. Addressing these harms does not require a wholesale redesign of corrections. Rather, it requires a shift in operational practices that recognizes sleep as a foundational condition for the health and safety of incarcerated people and staff.

This section provides corrections agencies with our recommendations for improving incarcerated people's sleep. Some involve modest material investments, while others involve adjustments to daily routines and long-standing practices that require staff to do things differently than they always have. The recommendations are grounded in evidence and informed by practices that are already being implemented and refined in prisons and jails.

These recommendations are intended to be comprehensive. No single change, on its own, is likely to produce dramatic improvements in sleep. But taken together, these reforms can meaningfully shift the conditions under which incarcerated people sleep, making restorative sleep the norm rather than the exception. Importantly, these recommendations do not prioritize sleep at the expense of safety or security. To the contrary, they reflect the reality that chronic sleep disruption undermines the very goals corrections agencies are tasked with achieving every day. Adjusting operations to support restorative sleep can reduce irritability, impulsivity, and conflict, improve emotional regulation, and create calmer nighttime environments—mitigating the security challenges staff routinely manage rather than exacerbating them.

Importantly, these recommendations do not prioritize sleep at the expense of safety or security. To the contrary, they reflect the reality that chronic sleep disruption undermines the very goals corrections agencies are tasked with achieving every day. Adjusting operations to support restorative sleep can reduce irritability, impulsivity, and conflict, improve emotional regulation, and create calmer nighttime environments—mitigating the security challenges staff routinely manage rather than exacerbating them.

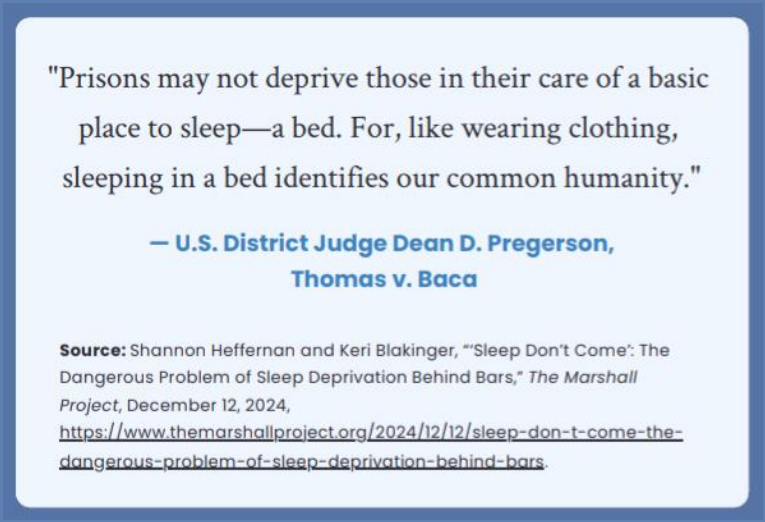
1. Install "normal" beds raised off the floor

Corrections agencies should ensure that all incarcerated people sleep in a standard, single-level bed raised off the floor and designed for adults. Floor sleeping should be eliminated in all housing areas, including intake units and overflow dormitories. Permanent beds provide a stable, predictable sleeping surface and reduce exposure to drafts, pests, moisture, mold, and mildew during the night, which increase health risks and the risk of nighttime arousals that interfere with consolidated sleep.

Beds should be "normal" in appearance and function. Furniture that more closely resembles college dormitory beds helps reinforce the expectation that nighttime is designated for sleep. These types of beds are also more likely to adequately support the body and reduce the risk of physical injury and involuntary awakenings caused by discomfort or instability.

In congregate living areas, this recommendation also means phasing out the use of bunk beds. Adult sleep is easily disrupted by another person's movement, breathing, or repositioning during the night, and bunk beds amplify these disturbances. They are also poorly suited to support adult height and weight, and they introduce additional health and safety risks. In addition to concerns over the health and wellness of incarcerated people, avoiding injuries associated with bunk beds can reduce the need for costly healthcare interventions.

Where immediate elimination of bunk beds is not feasible, agencies should phase them out, beginning by removing top bunks for medically vulnerable populations. Vulnerable populations include older adults, pregnant people, and people living with physical health challenges that make it dangerous for them to be climbing on and off a bunk bed. Agencies should also prioritize people who take psychotropic medication that results in heavy sleep, which affects their spatial awareness. Eliminating the top bunks in these cases reduces the risk of falls and their associated injuries while also minimizing nighttime disruptions caused by instability or fear of movement.



Eliminating floor sleeping and moving toward normalized, adult-appropriate beds are achievable operational reforms. Where implemented, it has been associated with fewer complaints tied to nighttime disruption, discomfort, hygiene concerns, and injury—conditions that directly affect whether people are able to sleep through the night.

Source: Maine Department of Corrections, "The Maine Model of Corrections," presentation at the American Correctional Association Winter Conference, New Orleans, August 6, 2022, https://www.maine.gov/corrections/sites/maine.gov.corrections/files/inline-files/MDOC%20-%20ACA%202022%20New%20Orleans%20-%20Maine%20Model%20of%20Correction%20%288.6.2022%29_0.pdf

2. Improve the quality of mattresses and bedding

Corrections agencies should replace worn-out, dirty, unsupportive mattresses, sheets, pillows, and blankets, and procure replacement items that support adult sleep and basic hygiene. This means using thicker, higher-density, commercial-grade mattresses designed for daily use and providing incarcerated people with durable sheets, blankets, and pillows. It also means ensuring bedding is washed on a regular schedule as well as tracking the age of mattresses and replacing deteriorated or unsanitary items in a timely manner. Mattresses and bedding should be treated as core infrastructure, given their central role in sleep, pain management, and physical support.

Mattresses and bedding should be treated as core infrastructure rather than discretionary items, reflecting their central role in supporting restorative sleep, reducing pain, and enabling daily functioning.

3. Increase personal space for sleep

Corrections agencies should increase the amount of personal space allotted for sleep, particularly in dormitory-style housing. Even modest increases in spacing between beds can reduce noise transmission, unwanted physical contact, and sleep interruptions caused by others' movement, breathing, or restlessness. More personal space at night allows people to settle into sleep without the constant sensory input and unpredictability that can interrupt sleep in crowded areas.

Where feasible, agencies should establish a preference for single-occupancy sleeping rooms, especially for older adults, people with disabilities, and those with medical or mental health needs. International standards identify that single-cell housing supports privacy and safety for incarcerated people more than shared sleeping arrangements.[281] Importantly, this recommendation does not call for housing or social isolation akin to solitary confinement conditions, which can cause irreparable psychological harm.[282] Rather, it recognizes that a private sleep space, when paired with daytime social interaction and activity, supports restorative sleep and reduces nighttime disturbance.

At the same time, corrections agencies should account for the distinct needs of women in custody when making changes to sleeping arrangements. Research shows the importance of community, connection, and a sense of safety in women's living environments—needs that dormitory-style housing may partially meet in the absence of other opportunities for support. Before eliminating dormitory-style housing for women, agencies should ensure that alternative opportunities for connection and mutual support are in place through programming, shared

[281] United Nations General Assembly, "Nelson Mandela Rules," Rule 12.
[282] Tiana Herring, "The Research Is Clear: Solitary Confinement Causes Long-Lasting Harm," Prison Policy Initiative, December 8, 2020, https://www.prisonpolicy.org/blog/2020/12/08/solitary_symposium/.

activities, and thoughtfully designed communal spaces. In this way, agencies can address women's distinct needs while also providing the conditions necessary for restorative sleep.

By reducing interpersonal disruptions and increasing predictability after lights out, increasing personal sleep space supports more stable sleep. When people can rest without fear of physical intrusion or sudden conflict, the nervous system is better able to disengage, allowing sleep to deepen and become more restorative over time.

4. Increase the amount of dedicated, uninterrupted sleep

Corrections agencies should restructure daily schedules to designate a protected overnight period for sleep. Ideally, this period should allow for seven to nine uninterrupted hours, consistent with sleep experts' guidance of four to six 90-minute full sleep cycles for physical and cognitive restoration. Achieving this requires aligning lights-out, wake-up times, counts, medication distribution, and meals so they occur outside the designated sleep window rather than fragmenting it.

Agencies should also account for people who work nonstandard hours, such as kitchen workers or those assigned to overnight duties. Housing these individuals together and providing a protected daytime sleep period with reduced light, noise, and interruptions is a practical approach that minimizes disruptions for overnight workers while still allowing the facility to operate as usual during the day. Aligning housing assignments with work schedules helps prevent chronic circadian disruption and reduces cumulative sleep loss among people whose schedules do not align with a traditional day–night routine.

Additionally, agencies should adjust staff policies and procedures, such as shift changes and routine announcements, to ensure they do not interrupt the designated sleep period.

Increasing the number of hours available for uninterrupted sleep allows incarcerated people to complete full sleep cycles, supporting better cognitive functioning, emotional regulation, and physical health, while also contributing to calmer, more stable housing units.

5. Redesign nighttime count protocols to avoid waking people overnight

Corrections agencies should redesign nighttime count procedures so staff can confirm safety without waking incarcerated people whenever possible. During designated sleep periods, the default approach should be to visually confirm through indirect observation that incarcerated people are present and breathing. Targeted flashlight use should be reserved for situations in which staff cannot otherwise confirm safety. Requiring people to wake, stand, or verbally respond

should be limited to circumstances where staff cannot confirm, through indirect observation and targeted flashlight use, that someone is breathing, indicating a possible health or safety concern.

This approach preserves essential safety functions while significantly reducing involuntary awakenings. It also creates clearer guidance for staff by distinguishing between routine overnight practices and situations that genuinely require more intrusive checks.

Exceptions are appropriate for individuals with acute safety needs, including people on suicide watch, those experiencing serious mental health crises, or individuals with medical conditions requiring overnight medication or monitoring. In these cases, more frequent or direct checks may be necessary. Even then, agencies should minimize disruption wherever possible by using low-intensity lighting and avoiding unnecessary noise.

Sleep science consistently shows that forced awakenings fragment sleep and prevent people from completing full sleep cycles. By minimizing unnecessary nighttime disruptions and reserving intrusive checks for situations that truly require them, revised count protocols preserve sleep continuity while maintaining institutional security. These changes do not compromise safety practices; they refine them in ways that support sleep and stability on housing units overnight.

6. Reduce loud, disruptive noises during designated sleep periods.

Corrections agencies should revise nighttime procedures to reduce unnecessary noise in housing units during designated sleep periods. This includes limiting non-emergency maintenance, routine announcements, and other operational activities that can be scheduled outside overnight hours. Overnight sick calls should be reserved for only medical emergencies, and routine requests and non-urgent health care encounters should be deferred until morning whenever clinically appropriate.

Loud noises during wake-up calls are also important. Absent an emergency, agencies should prohibit the use of whistles, shouted commands, or other jarring wake-up methods. Sudden, anxiety-inducing noise does more than interrupt sleep—it can heighten irritability and physiological stress responses that people carry with them throughout the day, increasing tension on housing units. Clear expectations about quiet conduct during nighttime rounds help staff maintain control while supporting calmer, more stable overnight environments.

Research consistently shows that lower ambient noise reduces micro-arousals that fragment sleep, allowing for deeper and more continuous rest. By reducing avoidable noise during designated sleep periods, agencies can improve sleep quality while reinforcing order, predictability, and institutional stability overnight.

7. Replace fluorescent lighting or use light covers

Corrections agencies should replace harsh fluorescent lighting with warmer-spectrum fixtures or install light covers or shields to reduce intensity and glare at night. Lighting must remain sufficient for observation and safety during overnight counts and welfare checks, but it does not need to replicate daylight conditions while incarcerated people should be sleeping. The goal is not darkness at all costs, but lighting that allows staff to safely do their jobs without stimulating incarcerated people to wakefulness throughout the night.

In addition to reducing light at night, corrections agencies should increase opportunities for incarcerated people to be exposed to natural light during the day. Daytime exposure to sunlight—through outdoor recreation, work assignments, or windows that allow natural light into living areas—helps anchor circadian rhythms and strengthens sleep pressure, making nighttime sleep more consolidated and restorative.[283] Facilities that expand access to outdoor time or daylight-filled programming spaces often do so for rehabilitative or wellness reasons, but these changes also support healthier sleep–wake cycles without requiring new security protocols.

Nighttime lighting should support safety without signaling perpetual daytime. By reducing unnecessary light exposure at night and increasing access to natural light during the day, agencies can promote healthier circadian rhythms, improve sleep continuity, and support calmer, more stable housing environments.

8. Provide eye masks and earplugs to incarcerated people

Corrections agencies should provide eye masks and earplugs to incarcerated people, particularly in housing units where lighting and noise cannot be fully eliminated. These items should be commercial-grade and treated as standard sleep aids, not discretionary privileges or special accommodations.

Because eye masks and earplugs are relatively inexpensive and easy to distribute, they offer an immediate mitigation strategy while larger environmental or operational reforms are underway. They are particularly useful in settings with persistent low-level noise, security lighting, or unavoidable nighttime movement.

While eye masks and earplugs do not eliminate environmental disruptions, they reduce sensory input during sleep hours. By limiting micro-arousals caused by light and noise, these basic sleep aids can help people spend more time in deeper, more restorative stages of sleep.

[283] Wright et al., "Entrainment of the Human Circadian Clock," 1556.

9. Maintain nighttime temperatures within the optimal range for supporting sleep

Corrections agencies should maintain nighttime temperatures as close as possible to the range most consistently associated with high-quality sleep—generally between 60 and 67 degrees Fahrenheit, as sleep experts suggest. Where achieving that range is not immediately feasible, agencies should, at a minimum, maintain temperatures within established correctional standards, such as 65 to 80 degrees (as required in Arkansas facilities) or 65 to 85 degrees (as required in Texas jails). In facilities located in hot climates or in older buildings that rely on large floor fans, agencies should prioritize installing air conditioning in housing units. Temperature regulation should be treated as a core health and safety requirement rather than a discretionary comfort.

Maintaining stable nighttime temperatures reduces awakenings caused by heat stress or cold discomfort and supports longer periods of deep, restorative sleep, which can, in turn, reduce irritability, frustration, and physical health challenges among incarcerated people and staff.

10. Improve interactions between staff and incarcerated people

Corrections agencies should invest in improving everyday interactions between staff and incarcerated people. When staff communication is respectful and grounded in de-escalation rather than control, incarcerated people experience less fear and anxiety about staff behavior—an important factor in reducing nighttime rumination and hypervigilance that can interfere with sleep. Calmer interactions during the day and evening carry over into the night, making it easier for people to fall asleep and remain asleep.

Improving staff–resident interactions is not specifically a sleep intervention, but it does reduce fear, anxiety, and nighttime stress. By creating calmer, more respectful environments, agencies can reduce some of the ruminations that keep incarcerated people awake at night, supporting sleep while simultaneously improving safety and working conditions for staff.

11. Keep people busy and active during the day

Corrections agencies should expand access to programming, work assignments, recreation, education, and wellness services so that incarcerated people remain physically, cognitively, and socially engaged throughout the day. Consistent daytime activity helps build sleep pressure, making it easier to fall asleep at night and to reach deeper, more restorative stages of sleep. Active days also reduce the amount of unstructured time people spend in their housing units,

where conflicts with other incarcerated people and staff can arise, and the resulting fear and anxiety can stay with them when they try to fall asleep at night.[284]

To help expand programming, agencies should formalize partnerships with community-based providers to deliver a range of ongoing services that respond to the diverse needs of people in custody, including mental health care, substance use treatment, family support and reunification services, education, and employment preparation. These partnerships can expand agencies' capacity while improving continuity of care after release. Programs can be delivered in person and, when necessary, supplemented with virtual formats to ensure consistency during weather disruptions, staffing shortages, or other operational challenges.

Agencies could also expand programming by offering creative arts programs, such as writing workshops, visual art classes, theater programs, and music instruction. These types of programs provide cognitively demanding, emotionally expressive outlets that engage attention, reduce stress, and occupy sustained blocks of time during the day. Similarly, some agencies offer health and wellness programs, such as health education, smoking cessation, yoga, tai chi, and mindfulness classes that support physical regulation, stress reduction, and embodied awareness, all of which contribute to healthier sleep–wake patterns. Many of these programs can be delivered through partnerships with local colleges and universities, particularly institutions with large student bodies and programs that require service-learning credits, clinical placements, or internships. Graduate students in public health, social work, education, psychology, and the arts can facilitate classes under appropriate supervision, allowing agencies to expand programming without significant new staffing costs.

These activities provide yet another example of reforms that are not designed as sleep interventions, but their effects on sleep are clear. Structured, engaging days reduce excessive daytime napping, support circadian alignment, and help people fall asleep more quickly and stay asleep at night.

12. Normalize meal timing and improve food quality

Corrections agencies should adjust daily schedules so that meals are served at more normal times, eliminating extremely early breakfasts and excessively early dinners. Meal timing should align with circadian rhythms, reducing the need for unnecessary early wakeups and preventing overnight hunger-related sleep disruption.

Agencies should also improve food quality and align meals with nutritional standards. Increasing access to fresh, minimally processed foods, especially fruits and vegetables, helps stabilize metabolism, reduces nighttime hunger, and supports the body's ability to remain asleep through

[284] Troy Aidan Sambajon, "Can U.S. Prisons Take a Page from Norway? Five Questions," *Christian Science Monitor*, December 6, 2023, https://www.csmonitor.com/USA/Justice/2023/1206/Can-US-prisons-take-a-page-from-Norway-Five-questions.

the night. Together, normalized meal timing and improved food quality reinforce circadian alignment and make restorative sleep more attainable.

X. Conclusion

Sleep in prisons and jails is not merely an issue of comfort. It is central to the health, behavior, and overall safety of a prison or jail. When sleep is routinely disrupted, the effects ripple outward. It becomes harder for people to regulate emotions, harder to control impulses, and more likely that everyday stressors escalate into conflict between incarcerated people or between incarcerated people and staff. Chronic sleep disruption also contributes to serious physical and mental health conditions, exacerbating the challenges that corrections agencies must manage every day, not to mention the costs of providing health care for those conditions.

Despite these well-known consequences of chronic sleep disruptions, routine conditions and operations in prisons and jails remain misaligned with the environment required for restorative sleep. Physical conditions—such as inadequate mattresses, worn bedding, the use of bunk beds, crowded sleeping arrangements, loud noises, and excessive nighttime lighting—create environments that interfere with the body's ability to remain asleep. Operational practices further compound these problems. Middle-of-the-night counts, early wake-up calls and medication distribution, and poorly timed meals repeatedly interrupt sleep and blur the distinction between day and night that the body needs to reach the deeper, more restorative stages of the sleep cycle. During the day, limited access to meaningful activity, insufficient exposure to natural light, and nutritionally inadequate food undermine the buildup of sleep pressure that helps people fall asleep and stay asleep at night.

Corrections agencies often defend these practices as necessary for safety and security. Yet many of these routines directly interfere with the sleep process, and the resulting chronic sleep loss frequently exacerbates, rather than mitigates, the very safety concerns agencies are trying to manage. Sleep-deprived environments are more volatile, not more secure. They produce higher levels of irritability, impulsivity, and stress, increasing the likelihood of conflict, disciplinary incidents, and health crises.

The recommendations in this report do not ask agencies to choose restorative sleep over safety and security. Instead, they show that adjusting operations to support restorative sleep can reduce many of the conditions that undermine safety in the first place. Fewer involuntary awakenings, quieter housing units, and more engaging activities during the day contribute to reduced tension,

The recommendations in this report do not ask agencies to choose restorative sleep over safety and security. Instead, they show that adjusting operations to support restorative sleep can reduce many of the conditions that undermine safety in the first place.

fewer conflicts, and more stable environments for both incarcerated people and staff. In this sense, sleep-supportive operations function as a form of prevention—addressing the root of so many issues corrections agencies manage every day, rather than responding to downstream crises.

Chronic sleep disruption among incarcerated people is counterproductive to the goal of operating safe, secure, and well-managed facilities. Treating restorative sleep as a core operational concern can create conditions that support the health and safety of everyone who lives and works in prisons and jails. The question is no longer whether sleep matters in these facilities. It is whether agencies are willing to use what we know about sleep to run facilities that work better for everyone inside them.

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