National Safety Council

Long Covid and Workplace Safety

An Overview of Research Conducted
October 2024 – September 2025

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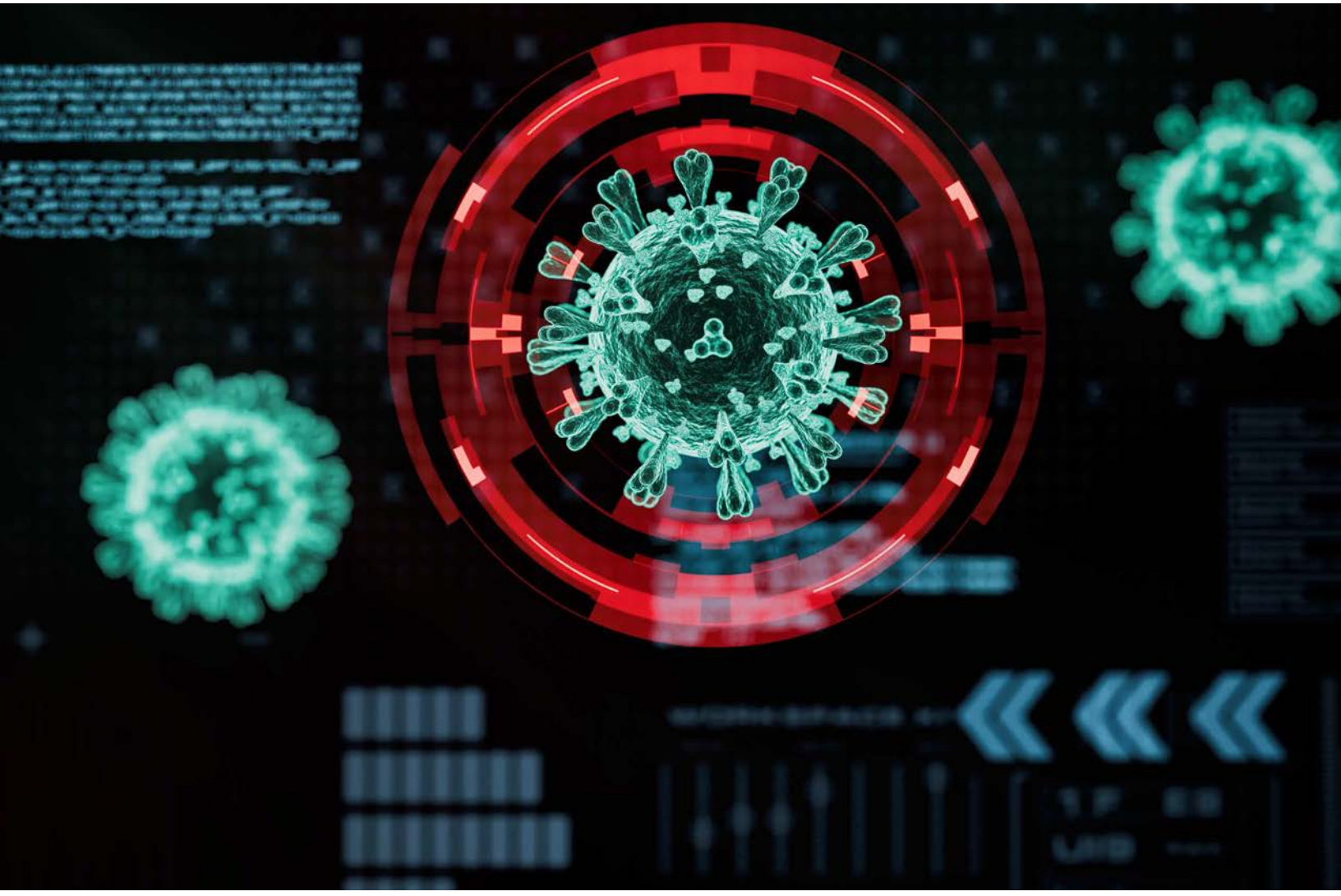
Introduction

The COVID-19 pandemic has had far-reaching impacts on global health, the workforce and workplace safety. While the immediate dangers of the virus were felt worldwide, an emerging concern for employers and safety professionals is the long-term effects that some people experience after the initial infection has cleared. Among these long-term effects, Long COVID is a condition characterized by lingering symptoms that persist for weeks or months after recovery from the acute phase of the illness. These lingering symptoms can range from fatigue and difficulty concentrating to more severe cognitive and physical impairments.

As with other chronic illnesses, workers experiencing Long COVID may be at higher risk of workplace injuries due to cognitive, physical and mental health challenges. Understanding how these symptoms interact with job tasks and safety protocols is essential to mitigating potential risks and supporting affected workers.

The purpose of this report is to provide safety professionals with an overview of the impact of Long COVID on workplace safety. Drawing from NSC survey data and existing research, this report will examine how Long COVID affects risk in the workplace, outline strategies to reduce these risks and provide resources for supporting affected workers. This information is vital for creating safer, more supportive work environments in a post-pandemic world.



Understanding Long COVID

Long COVID refers to a range of symptoms that persist for weeks or months after the initial COVID-19 infection has cleared. While acute COVID-19 primarily affects the respiratory system, Long COVID can affect multiple organ systems within the body, leading to chronic health issues.

Symptoms

Long COVID encompasses a wide variety of symptoms that vary in severity and can significantly disrupt daily life. While more than **200 symptoms have been linked to Long COVID**, the most common symptoms include:

- **Fatigue:** Persistent exhaustion that is not relieved by rest, often severe enough to interfere with work and daily activities.
- **Cognitive Impairment:** Often referred to as "brain fog," this includes difficulties with memory, concentration and clear thinking, which can affect decision-making and task completion.
- **Muscle and Joint Pain:** Ongoing muscle aches, weakness and joint pain that can impact mobility and physical tasks.
- **Shortness of Breath:** Ongoing respiratory issues that may limit physical activity or make it difficult to perform tasks requiring exertion.
- **Sleep Disturbances:** Difficulty sleeping or poor-quality sleep, contributing to fatigue and overall mental health decline.
- **Mental Health Issues:** Anxiety, depression and stress, which can arise as a result of the physical symptoms and the challenges of coping with prolonged illness.

Prevalence

The exact prevalence of Long COVID is still being studied, but estimates suggest that 10 to 30 percent of individuals who recover from the acute phase of COVID-19 experience lingering symptoms. Research indicates that those with more severe initial infections, particularly those who required hospitalization, are more likely to develop Long COVID, but even individuals with mild cases or asymptomatic infections can experience long-term effects. Furthermore, the risk of Long COVID appears to increase with age and the presence of underlying health conditions such as diabetes, cardiovascular disease and obesity.

The Impact of Long COVID on Workplace Safety

As the effects of Long COVID become more apparent, understanding its implications for workplace safety is essential for employers and safety professionals. Workers suffering from Long COVID may face physical, cognitive and emotional challenges that heighten their risk of workplace injuries. This section examines how these lingering symptoms influence the ability of workers to perform tasks safely and effectively, ultimately contributing to increased occupational hazards.

Cognitive Impairments

One of the most significant and widely reported symptoms of Long COVID is cognitive impairment, often referred to as brain fog. This includes difficulties with attention, memory and decision-making, all of which are critical skills for maintaining workplace safety. Cognitive impairments can lead to:

- **Inattention:** Affected workers may struggle to focus on critical tasks, increasing the likelihood of missing hazards or failing to follow safety procedures.
- **Altered Judgment:** The ability to make quick, informed decisions is compromised, which can be particularly dangerous in high-risk environments where fast reactions are necessary.
- **Memory Issues:** Forgetfulness or the inability to recall safety instructions or emergency procedures can create dangerous situations for both the affected worker and their colleagues.

These cognitive challenges can lead to poor safety performance and contribute to accidents, particularly in industries that require high levels of attention, such as manufacturing, health care and transportation.

Physical Limitations and Fatigue

Fatigue is another common symptom of Long COVID, and it is one of the most debilitating. Workers experiencing chronic exhaustion may struggle to meet the physical demands of their job. This can manifest in several ways:

- **Decreased Physical Endurance:** Tasks that were once routine may become exhausting, leading to reduced productivity and an increased likelihood of overexertion or mistakes due to fatigue.
- **Muscle Weakness and Joint Pain:** These symptoms may make it difficult for workers to lift, carry or perform other physically demanding tasks safely. This can increase the risk of strains, sprains and musculoskeletal injuries.
- **Reduced Reaction Times:** Fatigue and physical limitations can delay a worker's ability to respond quickly to safety hazards, which is critical in environments with dynamic or fast-paced conditions.

Workers in physically demanding jobs, such as those in construction, transportation or emergency services, may be particularly at risk. These industries often require sustained physical effort and quick reactions, making Long COVID symptoms especially problematic.

Mental Health Effects and Their Role in Safety

Mental health symptoms and conditions, including anxiety, depression, sleep disorders, obsessive-compulsive symptoms, initial onset of substance use disorder and post-traumatic stress, are also more prevalent among individuals with Long COVID than the general population and compared with those recovering from influenza[1]. The physical strain and chronic nature of the condition can also take a toll on mental wellbeing, leading to:

- **Decreased Motivation:** Workers experiencing mental health struggles may feel less motivated to follow safety procedures or perform at their best, which can reduce overall workplace safety culture.
- **Increased Stress:** Chronic stress from coping with Long COVID symptoms can impair a worker's ability to focus, plan and make sound judgments, increasing the likelihood of mistakes and accidents.
- **Social Withdrawal:** Those affected by mental health symptoms may withdraw from coworkers or avoid engaging in safety discussions, creating gaps in communication and team cohesion, which are essential for maintaining a safe work environment.

Mental health support and workplace accommodations are vital in addressing these challenges and supporting the wellbeing of affected employees.

[1] https://library.samhsa.gov/sites/default/files/pep23-06-05-007.pdf

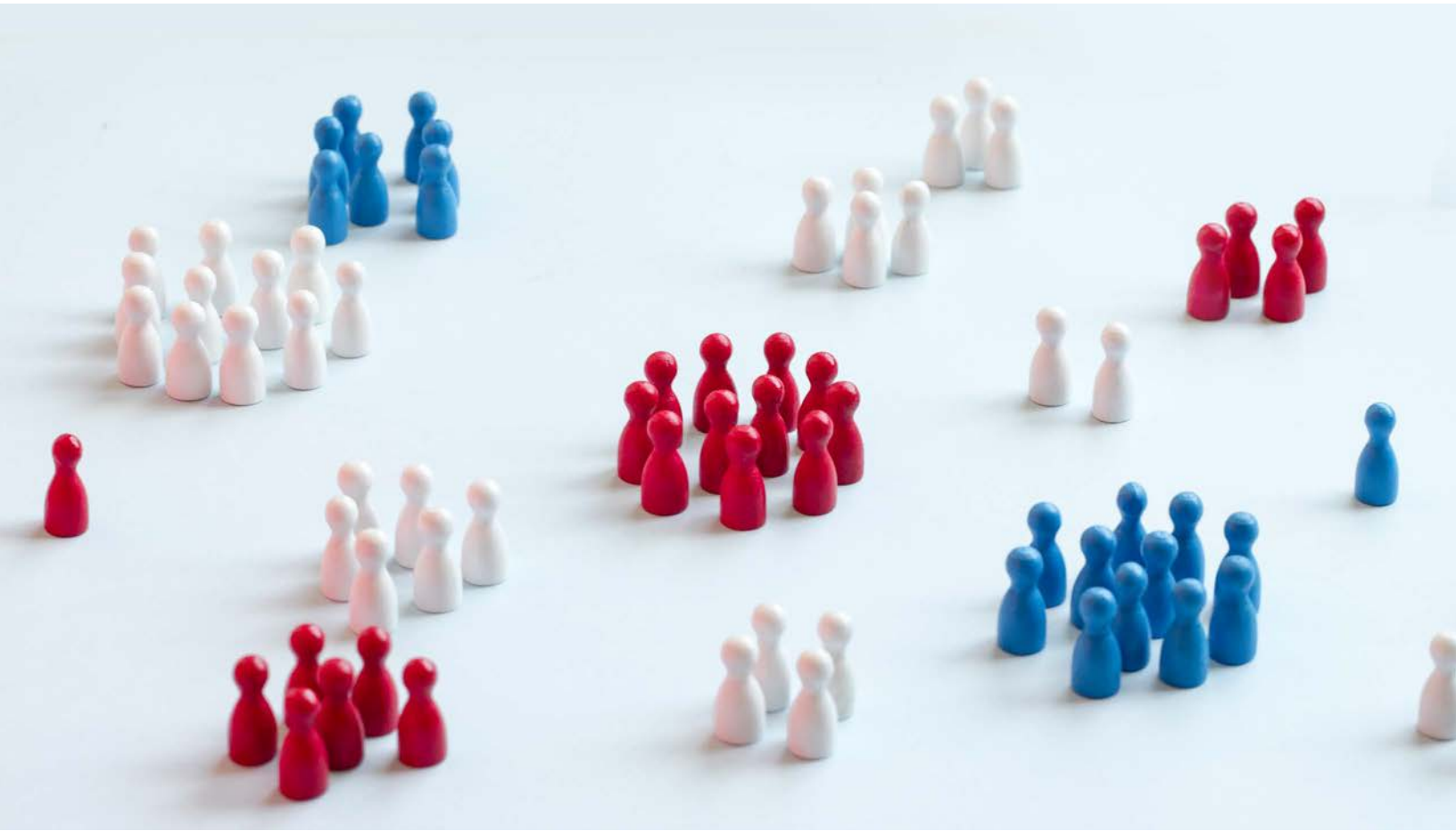
NSC Survey Findings on Long COVID and Occupational Risk

A survey conducted by NSC provides insights into how Long COVID symptoms are related to workplace injury rates. See Appendix A for information about survey methodology and data analysis.

NSC Survey Findings on Workplace Injury Rates

The survey of 1,500 full-time workers found a strong connection between Long COVID symptoms and workplace injuries. Participants were grouped into three categories based on their COVID-19 history and the duration of any lingering symptoms. One group consisted of workers who had never tested positive for COVID-19, while the second group included those who had tested positive but did not experience symptoms beyond the typical recovery period. The third group comprised individuals who continued to experience symptoms for three months or longer after their initial infection.

The results showed that workers who experienced Long COVID symptoms were more likely to report having experienced a workplace injury at their current job that required medical attention and/or time off work compared with those who either never had COVID-19 or recovered without prolonged symptoms. While self-reported survey data does not imply a causal link between Long COVID symptoms and workplace injuries, the ongoing physical and cognitive challenges associated with Long COVID, such as fatigue, brain fog and muscle weakness, can significantly affect an individual's ability to perform their job safely. As with any individuals experiencing chronic illness, many workers dealing with these lingering symptoms likely face heightened risks in the workplace, underscoring the need for targeted safety measures and accommodations to support them.



Risk Factors and Vulnerable Populations

It is important to recognize that certain workers are more vulnerable to the condition's impact on workplace safety. Understanding the risk factors that make some populations more susceptible to both Long COVID and its occupational risks is crucial for designing effective workplace interventions. This section explores demographic, health-related and occupational factors that may contribute to increased vulnerability to Long COVID and heightened workplace safety concerns.

Demographic Factors

1. **Age:** Age is a significant risk factor for both the development of Long COVID and its impact on workplace safety. Studies have shown that older workers with Long COVID are more likely to experience severe fatigue, cognitive impairments and physical limitations, all of which contribute to a higher risk of workplace injuries. In addition, age-related changes in physical and cognitive function may exacerbate the symptoms of Long COVID, further increasing the vulnerability in demanding job environments.
2. **Gender:** Research has indicated that women may be more likely to experience Long COVID symptoms than men. This may have implications for gendered occupational safety risks, particularly in industries where women are overrepresented, such as health care and administrative roles. Employers should be mindful of gender disparities when assessing risks.
3. **Race and Ethnicity:** According to studies funded by the National Institutes of Health (NIH), Black and Hispanic Americans are more likely than White and Non-Hispanic Americans to experience symptoms of Long COVID but are less likely to be diagnosed with the condition. NIH reported that reasons for this may include varying symptom presentation in different racial and ethnic groups, as well as health care access disparities.

Health-Related Factors

1. **Pre-existing Health Conditions:** Workers with pre-existing medical conditions are at a higher risk of developing Long COVID and experiencing more severe symptoms. Conditions such as cardiovascular disease, diabetes, obesity and autoimmune disorders increase the likelihood of severe COVID-19 illness and may contribute to prolonged recovery. Additionally, these workers may face compounded risks when it comes to workplace safety. For example, individuals with chronic conditions that affect their physical mobility, stamina or mental acuity may struggle more with tasks that require physical exertion or focus, increasing their risk of accidents.
2. **Mental Health Issues:** Individuals with pre-existing mental health conditions may experience more severe cognitive symptoms (e.g., brain fog) and physical fatigue. Furthermore, mental health issues can negatively impact a worker's ability to engage with safety protocols, decreasing awareness of hazards and reducing overall safety performance. The added mental strain of dealing with both Long COVID and pre-existing mental health challenges creates a heightened risk for workplace accidents.
3. **Immune System Dysfunction:** Workers with compromised immune systems, whether due to autoimmune diseases, cancer treatment or other immunocompromised conditions, may experience more severe Long COVID symptoms or prolonged recovery periods. These workers could be particularly vulnerable to the physical demands of certain occupations, as their bodies may take longer to heal from the effects of Long COVID.

Occupational Factors

1. **Job Role and Industry:** Certain occupations are inherently riskier for workers with Long COVID due to the physical, cognitive and emotional demands they place on individuals. For example:
    - **Health Care Workers:** Due to the physically demanding nature of their work, including long shifts, patient lifting and high-stress environments, health care workers with Long COVID may struggle with stamina, physical strength and cognitive clarity. This can lead to fatigue-related errors, manual handling injuries and exposure to workplace hazards.
    - **Transportation and Logistics:** Workers in transportation, including truck drivers, pilots and delivery personnel, face significant hazards if they develop Long COVID symptoms. Cognitive impairments such as difficulty focusing and delayed reaction times can increase the risk of accidents in industries that rely on quick decision-making and situational awareness. Long hours on the road or operating machinery can also exacerbate fatigue, leading to further physical strain and higher injury rates.
    - **Construction and Manufacturing:** Workers in construction and manufacturing are often required to engage in strenuous physical tasks, such as lifting, operating heavy machinery and maintaining alertness on construction sites. Long COVID's effects, particularly fatigue and muscle weakness, can make it difficult for workers to perform these tasks safely, increasing their vulnerability to musculoskeletal injuries and accidents involving equipment.

2. **Workplace Flexibility and Support:** Workers with Long COVID who lack flexible working arrangements or adequate support systems may face additional challenges in managing their symptoms and workplace safety. Workers who are unable to adjust their hours or workloads to accommodate fatigue or cognitive issues may experience higher levels of stress, leading to burnout and safety lapses. Remote work options, flexible hours and clear communication about available support are essential to reducing risks for these workers. Employers who provide accommodations for workers with Long COVID can help reduce the likelihood of accidents and ensure a safer work environment.

Social Determinants of Health

Social and economic factors also play a significant role in a worker's vulnerability to Long COVID and its impact on workplace safety. Workers in lower-income jobs or those without access to health care coverage may be at higher risk of developing severe Long COVID symptoms due to delayed diagnosis or lack of treatment. These workers may also face additional stressors related to financial instability, poor housing conditions or limited access to mental health support, which can compound the effects of Long COVID.

Mitigating the Risk of Long COVID in the Workplace

As Long COVID continues to impact the workforce, it is essential for employers and safety professionals to implement strategies that mitigate the risks associated with this condition. By proactively identifying risks and adopting appropriate measures, organizations can support affected workers and create a safer, more inclusive workplace. This section explores practical strategies for reducing the impact of Long COVID on workplace safety, focusing on accommodations, preventive measures and workplace safety protocols.

Conduct Comprehensive Risk Assessments

A key step in mitigating the risk of Long COVID in the workplace is conducting a thorough risk assessment to identify potential hazards that may be exacerbated by the symptoms of Long COVID. Employers should evaluate the physical, cognitive and mental health demands of various job roles and identify areas where Long COVID symptoms could lead to accidents or unsafe conditions.

- **Physical Risk Assessment:** Review job tasks that require significant physical exertion, such as lifting, standing for long periods or operating machinery. For workers experiencing fatigue or muscle weakness, these tasks can increase the risk of physical strain or injury.
- **Cognitive Risk Assessment:** Evaluate tasks that require high levels of attention, concentration and decision-making. Workers experiencing cognitive impairments may be at risk of making mistakes, missing safety hazards or failing to follow safety protocols. Identifying critical tasks where cognitive function is essential can help prioritize interventions.

Implement Workplace Accommodations

Flexible Work Arrangements

One of the most effective ways to support workers with Long COVID is by offering flexible work arrangements. Flexibility in work schedules and locations can help workers manage fatigue and other symptoms more effectively.

- **Reduced Hours or Part-Time Work:** Workers with Long COVID may struggle with prolonged hours of work due to fatigue and other symptoms. Reducing work hours or offering part-time schedules can help employees balance work with recovery and reduce the physical strain on their bodies.
- **Remote or Hybrid Work:** For roles that can be performed remotely, allowing workers to work from home can alleviate the burden of commuting, offer a more comfortable work environment and help manage symptoms like fatigue, cognitive fog or physical discomfort. Hybrid work models, where employees work both from home and in the office, can provide additional flexibility.
- **Phased Return to Work:** Workers returning after a period of illness may benefit from a gradual reintegration into their work roles. A phased return to work allows employees to start with lighter duties or fewer hours and gradually increase their workload as their condition improves. This approach helps reduce the likelihood of symptom flare-ups and overexertion, which can lead to setbacks in recovery.

Physical and Ergonomic Support

Given the physical symptoms associated with Long COVID, such as muscle weakness, joint pain and fatigue, ensuring that affected workers have access to ergonomic support is vital. Workplace modifications can reduce physical strain and help workers perform their tasks more comfortably and safely.

- **Ergonomic Workstations:** Modifying workstations to accommodate those with physical limitations can significantly reduce discomfort and fatigue. Adjustable chairs, desks and monitors can help ensure that workers maintain good posture and avoid musculoskeletal strain.
- **Assistive Devices:** Providing assistive devices such as sit-stand desks, footrests or voice-activated technology can help workers who experience joint pain or fatigue perform their tasks more comfortably and reduce the physical toll of their work.
- **Frequent Breaks:** Workers with Long COVID may need more frequent breaks to manage fatigue and recuperate. Employers should encourage regular rest periods and allow workers to take breaks as needed to rest, hydrate or perform restorative stretches and exercises. This helps reduce physical and mental strain, improving both wellbeing and performance.

Mental Health Support

The mental health impact of Long COVID is significant and often overlooked. Workers may experience anxiety, depression or acute stress, either as a result of the illness itself or the ongoing challenge of managing chronic symptoms. Employers should prioritize mental health support to ensure that affected workers have the resources they need to cope with their condition.

- **Employee Assistance Programs (EAPs):** EAPs provide confidential counseling and mental health services to employees. Offering these services can help workers with Long COVID manage stress, anxiety and other mental health challenges that may arise.
- **Mental Health Days:** Allowing employees to take mental health days as needed can help them manage stress and avoid burnout. This approach demonstrates empathy and understanding, fostering a supportive workplace environment.
- **Access to Therapy and Counseling:** Offering access to therapy, counseling or mindfulness programs can help workers process their emotions and develop coping strategies. Mental health support not only improves the wellbeing of employees with Long COVID but can also reduce the likelihood of safety incidents caused by stress or cognitive impairments.

Clear Communication and Workplace Culture

Clear communication and a supportive workplace culture are critical for helping workers with Long COVID feel comfortable discussing their health needs and seeking accommodations. Employers must foster an environment of empathy, trust and transparency to ensure that workers feel supported.

- **Open Dialogue with Supervisors:** Encourage open communication between direct reports and their supervisors. Managers should check in regularly with affected workers to understand their symptoms and challenges, offering assistance and accommodations as needed. This ensures that workers feel comfortable disclosing their condition and asking for help when necessary, thereby reducing safety risks.
- **Stigma Reduction:** It is important to minimize stigma around Long COVID and other chronic health conditions. Workers may fear judgment or discrimination if they disclose their symptoms, which can hinder their ability to seek the support they need. A culture of inclusivity and understanding can help eliminate this stigma and create a safe space for workers to share their experiences and seek help to reduce physical and psychosocial hazards.
- **Employee Resource Groups:** Establishing employee resource groups focused on health and wellbeing can provide affected workers with a platform for support and discussion. These groups can help foster a sense of community and allow workers to share coping strategies, advice and resources.

Legal Protections and Advocacy

Workers with Long COVID are entitled to certain legal protections, and employers must ensure that they are in compliance with relevant laws regarding disability and workplace accommodations.

- **Americans with Disabilities Act:** The ADA provides protections for workers with disabilities, including those caused by Long COVID. If a worker's Long COVID symptoms meet the criteria of a disability, employers are required to provide reasonable accommodations to help them perform their job duties. According to the Department of Health and Human Services, a person with Long COVID has a disability if the condition or associated symptoms either physically or mentally **substantially limits one or more major life activities**. Employers must ensure that their policies align with the **ADA** and **Equal Employment Opportunity Commission** to avoid discrimination and protect the rights of affected workers.
- **Family and Medical Leave Act:** Workers with Long COVID may be eligible for leave under the FMLA if their condition prevents them from performing their job duties. Employers should ensure that employees are aware of their rights under FMLA and provide the necessary support for those who need to take time off for medical reasons.

Training and Education for Managers and Colleagues

To ensure a supportive and inclusive environment, managers and colleagues should be educated about Long COVID and its potential impact on workplace performance and safety.

- **Manager Training:** Training supervisors and managers to recognize the signs of Long COVID and understand its effects on workers is crucial. Managers should be equipped with the knowledge and tools to provide the necessary accommodations, adjust workloads and support workers in managing their symptoms.
- **Awareness Campaigns for Workers:** Educating the broader workforce about Long COVID can help promote empathy and understanding. Training sessions, informational materials and awareness campaigns can reduce stigma and encourage a more supportive atmosphere for workers with Long COVID.

Conclusion

Mitigating the risks of Long COVID in the workplace requires a multifaceted approach that addresses the physical, cognitive and mental health challenges faced by affected workers. By conducting comprehensive risk assessments, implementing workplace accommodations, promoting mental health support, updating safety protocols and fostering a culture of awareness and communication, employers can reduce the likelihood of accidents and create a safer, more supportive work environment for all workers.

Resources for Safety Professionals

Supporting workers with Long COVID requires comprehensive resources that offer guidance on risk management, rehabilitation, workplace adaptation and worker support. Safety professionals can utilize a variety of tools and materials to address these challenges effectively. Here are some key resources from multiple sources:

The Chartered Institute of Personnel and Development

Working with Long COVID – Research Evidence to Inform Support: This 2022 report from CIPD provides insights and recommendations based on interviews with affected workers and roundtable discussions with industry professionals.

Working with Long COVID – Guide for Managers to Support Employees with Long COVID: This 2024 guide from CIPD provides specific guidance for managers, including a checklist based on the IGLOO (individual employee, the group, line manager, organization and outside resources) framework for facilitating sustainable return to work.

European Agency for Safety and Health at Work (EU-OSHA)

Impact of Long COVID on Workers and Workplaces and the Role of OSH: This EU-OSHA publication explores the impact of Long COVID on workers and workplace productivity, detailing the role of occupational health and safety in managing these effects. It discusses how Long COVID can affect physical, mental and cognitive capabilities and emphasizes the importance of updated risk assessments and workplace interventions to support affected employees.

Long COVID: Identification and Work Ability Assessment, Workplace Adaptation and Rehabilitation – A Practical Short Guide for Occupational Physicians: This practical guide offers insights into identifying Long COVID symptoms, assessing work ability and recommending workplace adaptations and rehabilitation strategies. It is aimed at occupational physicians and provides step-by-step instructions for supporting workers' return to work and ensuring their continued wellbeing.

Long COVID: Worker Rehabilitation, Assessment of Work Ability and Return to Work Support: This EU-OSHA publication highlights the rehabilitation process for workers with Long COVID, focusing on how to assess work ability, implement effective workplace adaptations and facilitate a safe return to work. It offers practical recommendations for employers and safety professionals to ensure that workers with Long COVID can return to work safely and effectively.

Long COVID: Rehabilitation and Practical Workplace Support: This resource provides practical recommendations for workplace adaptations, rehabilitation strategies and supporting employees with Long COVID. It focuses on the steps employers can take to create an inclusive work environment and help employees manage their symptoms.

COVID-19 Infection and Long COVID: Guide for Managers: Aimed at managers, this guide offers practical advice on managing employees with Long COVID. It covers topics such as workload adjustments, communication strategies, and fostering a supportive workplace culture that promotes recovery and minimizes risk.

COVID-19 Infection and Long COVID: Guide for Workers: This guide is designed to help workers understand Long COVID, recognize its symptoms, and navigate available support and accommodations in the workplace. It encourages workers to communicate with employers and access necessary resources to manage their condition while staying productive.

Department of Veterans Affairs (VA) Resources

The VA provides resources, including specific resources for veterans who receive care through the VA:

Symptom Checker: A Long COVID fact sheet and symptom checker

Veterans Health Library: Long COVID: Resources for affected veterans

The Job Accommodation Network (JAN)

JAN is a resource for employers looking to implement workplace accommodations for employees with disabilities, including those affected by Long COVID. JAN offers guidance on how to modify tasks, adjust work schedules and provide assistive technologies to help employees continue performing their duties effectively. **Visit JAN's website for resources.**

Mayo Clinic

Post-COVID Recovery & COVID-19 Support Group: The Mayo Clinic hosts a public support group that may be helpful for workers experiencing Long COVID.

Appendix A: Survey Methodology and Detailed Results

Study Design and Participants

A random sample survey design was employed to investigate the relationship between Long COVID symptoms and workplace injuries. Participants were recruited through random dialing of both cellphone and landline numbers. Eligible participants were full-time employees or contractors, aged 18 to 65, with a history of working at least 30 hours per week. Individuals who were self-employed or had worked fewer than 30 hours in the previous week were excluded from participation.

The final sample consisted of 1,500 participants, which was representative of the U.S. working population in terms of age, gender and occupational distribution. Data collection took place between November 16, 2023, and January 31, 2024.

Survey Instrument

The survey was designed specifically for this study and included both closed and open-ended questions. It focused on three main areas:

1. **Workplace Injury History:** Participants were asked about any injuries sustained on the job that required medical attention and/or time away from work.
2. **COVID-19 Infection Status:** Respondents were asked if they had ever tested positive for COVID-19.
3. **Long COVID Symptoms:** For those who tested positive, the survey assessed whether they had experienced symptoms lasting three months or longer and how these symptoms interfered with daily activities.

The survey also included open-ended questions to allow participants to provide detailed descriptions of their workplace injuries, offering qualitative insights into the types of injuries reported.

Data Analysis

Participants were categorized into three groups based on self-reported COVID-19 history:

1. **COVID-Negative:** Participants who had never tested positive for COVID-19.
2. **COVID-Positive Without Long COVID Symptoms:** Participants who tested positive for COVID-19 but did not experience symptoms lasting longer than three months.
3. **COVID-Positive With Long COVID Symptoms:** Participants who reported symptoms lasting three months or longer following their initial infection.

The relationship between Long COVID symptoms and workplace injury was analyzed using Chi-Square tests to compare injury rates among these groups. Post hoc analyses were conducted where necessary to further investigate specific group differences. A statistical significance threshold of $p < .05$ was used for all analyses.

Results

Demographic Characteristics

The sample of 1,500 participants was representative of the U.S. workforce in terms of age, gender and occupation. The mean age of participants was 43.2 years (SD = 10.9), with 49.4% of participants assigned male and 50.6% female at birth.

Primary Findings

Participants were grouped based on their COVID-19 infection history and symptom duration:

1. **COVID-Negative (n = 752):** Individuals who had never tested positive for COVID-19.
2. **COVID-Positive Without Long COVID Symptoms (n = 564):** Individuals who tested positive but did not experience symptoms lasting longer than three months.
3. **COVID-Positive With Long COVID Symptoms (n = 184):** Individuals who reported experiencing symptoms for three months or longer following their initial infection.

A Chi-Square test revealed a statistically significant difference in workplace injury rates across these three groups ($p = .005$). The distribution of workplace injury rates was as follows:

- **COVID-Negative:** 12.4% (n = 93)
- **COVID-Positive Without Long COVID Symptoms:** 13.5% (n = 76)
- **COVID-Positive With Long COVID Symptoms:** 20.7% (n = 38)

Post Hoc Analysis

Post hoc comparisons revealed that workplace injuries were significantly more common in the **COVID-Positive With Long COVID Symptoms** group compared with both the **COVID-Negative** ($p < .01$) and **COVID-Positive Without Long COVID Symptoms** ($p < .01$) groups. However, no significant difference was found in workplace injury rates between the **COVID-Negative** and **COVID-Positive Without Long COVID Symptoms** groups ($p > .05$).

Table 1. Crosstabulation

	History of Covid Infection			
	Covid Positive		Covid Negative	All groups
History of workplace injury	With LC Symptoms	Without LC Symptoms		
	n(%)	n(%)	n(%)	n(%)
Yes	32 (17.8%)	60 (9.6%)	69 (9.9%)	161 (10.7)
No	148 (82.2%)	564 (90.1%)	627 (90.1%)	1339 (89.3%)

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Content

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