

## KEY FINDINGS

### The Sleep Problem

- 37.2% of firefighters screened positive for at least one sleep disorder in a nationwide study of 6,933 firefighters
- Sleep disorders are an independent risk factor for heart attacks and motor vehicle crashes
- More than 80% of firefighters who screened positive for a sleep disorder were undiagnosed and untreated

### How the Study Was Done

- 6,933 firefighters from 66 U.S. fire departments screened using validated sleep disorder tools
- Screened for four disorders: obstructive sleep apnea (OSA), insomnia, shift work disorder, and restless legs syndrome
- Linked screening results to self-reported health and safety outcomes including motor vehicle crashes, cardiovascular disease, diabetes, depression, and anxiety

### What's At Stake

- Firefighters with a sleep disorder were 2x as likely to be involved in a motor vehicle crash
- Sleep disorders were associated with 2-3 times the risk of cardiovascular disease and diabetes
- 20% of firefighters screened positive reported falling asleep driving at least once per month



## Common Sleep Disorders Increase Risk of Motor Vehicle Crashes and Adverse Health Outcomes in Firefighters

### SUMMARY:

#### Why This Matters to You

Heart attacks and motor vehicle crashes are the two leading causes of on-duty firefighter death — and sleep disorders are an independent risk factor for both. Harvard researchers screened nearly 7,000 firefighters across 66 departments and linked sleep disorder risk to health and safety outcomes. The findings are stark: more than a third of firefighters have a sleep disorder, most don't know it, and the consequences reach far beyond feeling tired.

## Sleep Disorders and Firefighter Health: What the Numbers Show

### FINDINGS:

#### The Most Important Things to Know

- Obstructive sleep apnea is the most prevalent disorder: 28.4% of firefighters screened positive for OSA — yet 80.9% of those had no current diagnosis. OSA is an independent risk factor for hypertension, cardiovascular disease, and stroke.
- Sleep disorders double your crash risk: Firefighters who screened positive were twice as likely to report a motor vehicle crash in the prior month — and 2.4 times more likely to report near-crashes or falling asleep at the wheel.
- The cardiovascular and metabolic consequences are significant: Those screening positive had 2.4 times the odds of cardiovascular disease and 1.9 times the odds of diabetes — even after adjusting for age, BMI, smoking, and alcohol use.
- Mental health is also directly affected: Firefighters with a sleep disorder had 3.1 times the odds of a depression diagnosis and 3.8 times the odds of anxiety — making sleep one of the most powerful levers in firefighter behavioral health.

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## Big Picture: What Actually Works

### FIRE STATION TALKS

- More than a third of firefighters have a sleep disorder — and most have no idea. 37.2% screened positive across 66 departments, and over 80% of those were undiagnosed. You cannot manage a condition you don't know you have.
- Sleep disorders connect directly to the two leading causes of on-duty death. Heart attacks and motor vehicle crashes kill more firefighters than anything else — and sleep disorders are an independent risk factor for both. This is not a wellness issue. It is a safety issue.
- The 24-hour shift schedule creates the conditions for sleep disorders to develop and worsen. Nearly all departments in this study ran extended shifts — and shift work is known to aggravate OSA severity and increase cardiometabolic risk beyond what the disorder alone produces.
- Screening works. Firefighters in this study were referred to accredited sleep clinics after screening positive. Identifying who is at risk is the first step — and workplace screening programs are an efficient, evidence-based way to do it at scale.

## Key Actions: Protect Your Sleep & Your Health

### TAKEAWAYS

- Get screened for sleep disorders. More than 80% of firefighters who screened positive in this study were undiagnosed. If you snore, feel unrefreshed after sleep, or struggle with alertness on shift, ask your medical provider about a sleep evaluation.
- Treat sleep as a safety-critical variable, not just a wellness issue. Falling asleep at the wheel, doubled crash risk, and tripled depression odds are the documented consequences of untreated sleep disorders in the fire service.
- Practice sleep hygiene on and off shift. Limit caffeine late in shifts, keep a consistent sleep schedule when possible, avoid screens before sleep, and use independent sleeping quarters when available at the station.

### Data Sources:

BARGER, L.K., RAJARATNAM, S.M.W., WANG, W., O'BRIEN, C.S., SULLIVAN, J.P., QADRI, S., LOCKLEY, S.W., & CZEISLER, C.A. (2015). COMMON SLEEP DISORDERS INCREASE RISK OF MOTOR VEHICLE CRASHES AND ADVERSE HEALTH OUTCOMES IN FIREFIGHTERS. JOURNAL OF CLINICAL SLEEP MEDICINE, 11(3), 233-240.

### TAKING THE LEAD

- Implement a department-wide sleep disorder screening program. This study demonstrated that workplace screening identifies at-risk firefighters. Integrating sleep screening into annual medical evaluations is a direct, evidence-based intervention.
- Design stations to support sleep. Independent sleeping quarters and emergency tones that wake only the relevant personnel were specifically cited as structural improvements.
- Connect sleep health to your cardiac and mental health programs. Sleep disorders tripled depression odds and nearly doubled cardiovascular disease risk.

## What Chiefs Can Do: About Sleep Health

- Normalize sleep disorder treatment in your culture. Over 80% of affected firefighters were undiagnosed — stigma and lack of awareness are the barriers.
- Address second jobs and overtime as sleep risk factors. 33.7% of firefighters in this study worked a second job. Average monthly work hours were 255 — approximately 64 hours per week. Chronic sleep restriction at this level compounds disorder risk.
- Use crash and injury data to identify potential sleep disorder patterns. Doubled crash risk and elevated injury rates are documented outcomes of sleep disorders. Tracking these trends at the department level can flag at-risk crews.

## Conclusion

37% OF FIREFIGHTERS HAVE A SLEEP DISORDER — AND MOST DON'T KNOW IT. UNTREATED SLEEP DISORDERS DOUBLE CRASH RISK, TRIPLE DEPRESSION ODDS, AND SIGNIFICANTLY RAISE CARDIOVASCULAR AND DIABETES RISK. HEART ATTACKS AND MOTOR VEHICLE CRASHES ARE THE TOP TWO CAUSES OF ON-DUTY FIREFIGHTER DEATH — AND SLEEP DISORDERS ARE AN INDEPENDENT RISK FACTOR FOR BOTH. GET SCREENED. GET TREATED. SLEEP IS NOT A LUXURY — IT IS OPERATIONAL READINESS.

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