FINDING the best way to reduce the risks of fatigue isn’t only different among industries, it is also different among workers.

People respond differently to fatigue – you have to find what works for you

Long work hours and irregular work shifts are common in our society. Nearly one-quarter of American workers spend over 40 hours a week at work and almost 15 million work full time on evening, night, rotating or other irregular shifts. Work schedules like these may cause worker fatigue.

Shift workers may be scheduled to work days, evenings, nights and/or on a rotating or on-call basis. They may work extended shifts (more than 8 hours long), rotating or irregular shifts, or consecutive shifts resulting in more than the typical 40-hour work week. Long work hours may increase the risk of injuries and accidents and can contribute to poor health and worker fatigue. Studies show that long work hours can result in increased levels of stress, poor eating habits, lack of physical activity and illness. It is important to recognize the symptoms of worker fatigue and its potential impact on each worker's safety and health and on the safety of co-workers.

**What Causes Worker Fatigue?**

Several factors including too little, poor quality or interrupted sleep over a period of time can cause fatigue. Fatigue is the body's signal that a rest period is needed. Long work hours and extended and irregular shifts may be stressful physically, mentally and emotionally. The body operates on a circadian rhythm sleep/wake cycle. It is naturally programmed for sleeping during night hours. Demanding work schedules may disrupt the body's natural cycle, leading to increased fatigue, stress and lack of concentration.

**What are the Effects of Demanding Work Schedules?**

Long work hours and extended and irregular shifts may lead to fatigue and to physical and mental stress. Working extended shifts may also involve prolonged exposure to potential health hazards such as noise, chemicals, and others. These exposures could exceed established permissible exposure limits (PELs) or violate other health standards. Employers must implement measures to monitor and limit worker exposures to health and physical hazards in the workplace as required by the Occupational Safety and Health Act.

**What Worker Population Does This Affect?**

Irregular and extended shifts are common among healthcare providers, transportation workers, first responders, firefighters, police officers, military personnel, construction workers, oil field workers, service and hospitality workers and many others.

**What Are the Effects of Worker Fatigue?**

Worker fatigue increases the risk for illnesses and injuries. Accident and injury rates1 are 18% greater during evening shifts and 30% greater during night shifts when compared to day shifts. Reseach indicates that working 12 hours per day is associated with a 37% increased risk of injury2. In a 2005 study reporting on a survey of 2737 medical residents, every extended shift scheduled in a month increased by 16.2 % monthly risk of a motor vehicle crash during their commute home from work.

Decreased alertness from worker fatigue has been a contributing factor in:

Industrial disasters such as the 2005 Texas City BP oil refinery explosion, the 2009 Colgan Air Crash, the explosion of the space shuttle Challenger and the nuclear accidents at Chernobyl and Three Mile Island.

Increased sleep problems and risk for injury1 among full-time employees in relation to the number of hours worked per week.

Errors in patient care, increased needlesticks and exposure to blood and other body fluids and increased occupational injuries among healthcare workers.

Direct or indirect links to increased costs3 from lost productivity, increased injury and illness costs, increased time off the job due to illness and increased workers' compensation costs.

An estimated annual cost of $136.4 billion from fatigue-related, health-related lost productive work time to employers.

**How Can Fatigue Affect Worker Safety and Health?**

Fatigue can cause weariness, sleepiness, irritability, reduced alertness, impaired decision making, and lack of motivation, concentration and memory. Studies have shown that fatigue is linked to health problems such as:

Heart disease

Stomach and digestive problems

Musculoskeletal disorders

Reproductive problems

Depression

Some cancers (breast and prostate)

Sleep disorders

Poor eating habits/obesity

Worsening of existing chronic diseases such as diabetes and epilepsy

Worker fatigue has been studied in aviation and other modes of transportation, the military, emergency response, healthcare, firefighting, law enforcement and other fields. There are several ways that workers and employers can help reduce the hazards of worker fatigue.

What Can Employers Do?

Employers can reduce the risk of worker fatigue in the workplace by:

* Examining staffing issues such as workload, work hours, understaffing and worker absences, scheduled and unscheduled, which can contribute to worker fatigue.
* Arranging schedules to allow frequent opportunities for rest breaks and nighttime sleep.
* Making adjustments to the work environment such as lighting, temperature and physical surroundings to increase alertness.
* Providing worker education and training addressing the hazards of worker fatigue, the symptoms of worker fatigue, the impact of fatigue on health and relationships, adequate quality and quantity of sleep and the importance of diet, exercise and stress management strategies to minimize the adverse effects of fatigue.
* Consider implementing a Fatigue Risk Management Plan under which, like other risk factors, fatigue can be managed.

What is a Fatigue Risk Management Program?



Several federal agencies and national organizations have developed fatigue risk management program information. Some federal agencies and states have laws restricting the number of hours a worker can be on the job. These resources can assist your company in developing guidelines for work hours and for a Fatigue Risk Management Program.

What Can Workers Do?

Workers can promote restful, healthy [sleep](https://www.cdc.gov/sleep/index.html) by following *sleep hygiene* recommendations. Here are some suggestions:

What is healthy sleep?



* Make sure that your sleep period is 7-9 hours daily without disruptions.
* Try to sleep at the same time every day.
* Avoid drinks with caffeine prior to bedtime to improve sleep quality.
* If working evening or nights, make sure that sleep has occurred within the last 8 hours before going to work.
* If napping before work, make sure that the duration is less than 45 minutes or greater than 2 hours to allow for a complete sleep/wake cycle.
* Make sure that the sleeping environment is comfortable, cool, dark and quiet.
* Exercise regularly. Eat a balanced diet. Maintain a healthy weight.
* If you have difficulty sleeping, keep a sleep diary and talk to your doctor.