WorkTech

Fatigue Management

WorkTech's detailed labor reporting and analytics ensure leave time compliance with local, state, national & union regulations.

Are your Employees, Contractors, and their Workers observing safety practices and performing as effectively as possible?

Perhaps they are experiencing worker fatigue. Are you encountering increased absenteeism and turnover, reduced morale, and increased numbers of accidents and mistakes in your operations? Are you at risk for non-compliance with Federal, state, union, or industry regulations and guidelines, or are you at risk of litigation? Worker fatigue is frequently a major factor in these serious business problems.

What is Worker Fatigue?

Worker fatigue is physical tiredness and a mental state of impaired alertness, attentiveness, and cognition that leads to:

- Reduced fine and gross motor coordination
- Slower reaction times
- Loss of environmental awareness
- Decreased cognitive and logical reasoning ability
- Poor judgment and ability to make decisions
- Diminished ability to communicate—both to receive and process information and to send critical information

Regulations and Guidelines to Mitigate Worker Fatigue

Research on mitigating worker fatigue and the development of regulations and guidelines has been ongoing over the last 20 years. Various industry and government bodies have reached a consensus: The best way to minimize worker fatigue and associated risks is by implementing a comprehensive fatigue risk management system (FRMS). The FRMS should be integrated with other safety management systems as necessary. Several sets of regulations now exist for different industries.

The BP refinery incident led to the current Recommended Practices (RP) 755 guidelines for recognizing and managing fatigue in the petrochemical workplace. The goals of RP 755 and other regulations are worker and operations safety, fatigue mitigation, and risk reduction. The regulations focus on providing guidance to all stakeholders—Employees, Workers, Managers, and Supervisors—on how to recognize and manage fatigue and associated risks. The regulations apply to all Workers, including Contractors, working night shifts, rotating shifts, extended hours and days, or call outs involved in safety-sensitive process work.

In some cases, worker fatigue can lead to severe accidents, such as the British Petroleum (BP) Texas refinery incident in 2005.

Fatigue Risk Management Systems

It is well documented that workplace fatigue is a risk to safe operations. And the consensus is that implementing an FRMS is the best solution to the problem. WorkTech can provide such a solution. We can implement an effective, automated FRMS that is tailored to meet the needs of your Corporation.

Effects of Work Fatigue in the Workplace

Ignoring fatigue management and its concomitant risks poses a serious threat to maintaining safe operations and smooth processing in refineries and in petrochemical and other complex industries.

For the Worker, fatigue results in:

- Reduced ability to work safely and productively
- Likely accidents and omissions in procedures
- Impaired ability to communicate effectively with Co-Workers and Managers, resulting in negative interpersonal activities and feelings.

For the Corporation, fatigue results in:

- Increased absenteeism
- High Worker turnover
- Reduced morale and poor labor relations
- Increased costs for worker medical care and Worker's Compensation
- Risk of worker injury or death, environmental damage, and loss of assets due to accidents

Causes of Worker Fatigue

- Excessive hours of work on a shift
- Rotating shifts
- Night shifts and exposure to light
- Insufficient recovery time between shifts

- Extended hours
- Callouts (requiring a Worker to report when he is not scheduled)
- Disrupted circadian cycles

Extended Work Hours vs. Productive Hours
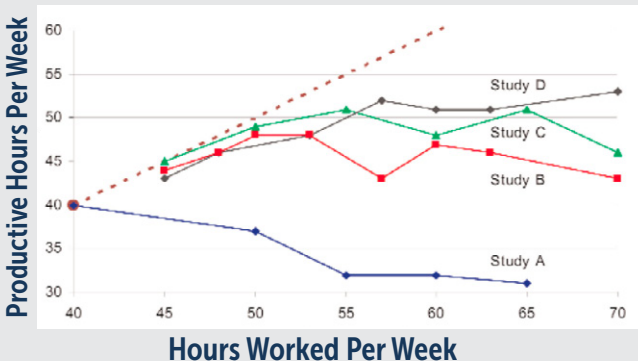
Study A shows productive hours when a person is excessively fatigued. Study B shows productive hours when a person worked four weeks of extended hours. Studies C and D show productive hours when a person worked just one week of extended hours.

Source: Nevison, J. Overtime Hours: The Rule of Fifty. 2003. Taken from Circadian, The Myths & Realities of Fatigue. 2013.

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# WorkTech

Implementing the WorkTech FRMS Solution

After the Corporation identifies and engages stakeholders, it needs to gather reliable data that includes:

- Hours worked during a shift
- Recovery time
- Consecutive days worked
- Rotations and frequency
- Maximum hours worked per week
- Work patterns
- Schedules
- Type of work performed
- Job location

WorkTech captures this data through Access Control. For example, if a Worker worked outside his schedule on one day, and reported for work on another scheduled day, a fatigue violation might occur. In such a case, the Access Control component can be configured to interact with the Fatigue Management component to notify the Worker and Supervisor of the issue and to block the Worker from the job for that day.

WorkTech's Fatigue Management component not only helps with compliance but also helps the Corporation identify the best employees—by skill and level of non-fatigue—to work open or non-scheduled shifts. In partnership with CIRCADIAN®, a research and software company that provides publications and tools for corporations that have 24/7 workforces, WorkTech can generate a "fatigue score" for each worker. The proprietary algorithm uses factors, such as worker data during the previous 14 days and scheduled over the next seven days. The score can be used as a factor in predicting when a Worker's productivity might drop off and when the risk of an accident is increased.

Implementing the Work Tech FRMS solution can be a turning point for any Corporation addressing the issues of worker fatigue and compliance. In addition to reducing stress and fatigue levels for Workers and minimizing the risks of accidents and litigation, the WorkTech FRMS solution can improve Worker alertness, health, safety, and productivity. And it enables you to readily comply with all union and government regulations, including the RP 755 guidelines.
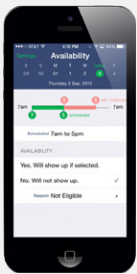
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Contact us to discuss your requirements for employee time recording, contractor cost tracking, overtime management, and leave and fatigue management.