



TAKE FIVE for Safety-Shift Work and Fatigue-NIOSH Guidance Synopsis

Frank Craner

October 21, 2025









@BrookhavenLab

Worker Fatigue

Decreased alertness from worker fatigue has been a factor in industrial accidents, including:

- 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.



Scheduling Considerations for Supervisors

- Variables to consider include:
 - How long a shift is.
 - How many shifts are worked before a rest day.
 - How many rest days are on weekends.
 - Whether there is overtime.
 - How much rest is taken between shifts.
 - How much rest is taken during the shift.
 - Whether the work schedule is regular and predictable.
- There is no ideal schedule that fits every situation. Both good and bad points can be found in most work schedules.



Approaches to Work Scheduling Challenges

Organizational or group approaches include

- redesigning the work schedule,
- redistributing the workload,
- improving the work environment, and
- instituting programs to improve worker awareness.

Individual approaches include

- improved sleep strategies,
- exercise and diet programs, and
- relaxation techniques.



Managing and Changing Schedules

- Changing a schedule is not easily done and must be handled carefully.
 - Designing a work schedule has a large and immediate impact on all workers.
 - Working hours affect how people arrange the rest of their lives. So any time a work schedule is changed, many aspects of job life and home life must be considered.
- It is recommended that any work schedule change should first be temporary and evaluated carefully.
 - The benefits of the change must outweigh the possible negative aspects.
 - If it really is a change for the better, then it can be established on a permanent basis.
- Because such a change is complex, it is a good idea to consult ergonomics, or human factors, specialists for help in work schedule design and evaluation.



Conclusion

- Be aware of the effects of fatigue, and group and individual strategies for managing it.
- Also consider change in seasons, length of schedule period, and other uncertainties.
- Many C-AD groups have decades of experience with scheduling shift work.
 - What are some of the "Best Practices" in use by groups and individuals at C-AD?



Reference

NIOSH: Plain Language About Shiftwork

Plain Language About Shiftwork (97-145) | NIOSH | CDC

