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Support for workers to design
shifts - SPI removes 8 hr.
rotating schedules for most plants

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SECY-02

Office Temperature Affects Productivity

A common complaint of many workers is that office temperatures are too cold in the summer months, even when the weather is hot outside. Not only might this AC overkill be costing companies in the electric bill, it appears it also has costs in decreased productivity. Research out of Cornell University documented productivity gains of \$2 per hour per worker when the office temperature was raised from 68 degrees to 77 degrees. Typing errors fell by 44% and overall typing output increased by 150%. According to the International Facility Management Association, office temperature tops the list of the 10 most common office complaints. — Stephanie Armour, "Summertime, and the Workplace Is Chilly." *USA Today*. July 5, 2005.

CIRCADIAN COMMENTARY

There are many aspects of designing a work environment that is conducive to productivity. Temperature is just one variable that can affect workers' minds and bodies in ways that can either be detrimental to their productivity or encourage it. Lighting is a particularly important environmental factor, as improper lighting can cause workers to feel unusually fatigued. Paint colors can also have effects on alertness, as can ambient sounds (ie, white noise), and, of course, temperature. These factors can often be considered in the context of an ergonomic review of a workplace, where physical layout and equipment are also studied. For many employers, the costs of such improvements are quickly recouped through productivity gains. — Ben Schlesinger, bschlesinger@circadian.com.

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RESEARCH CORNER:

12s vs. 8s: Recovery Time Between Shifts Is More Important Than Shift Length

Every year for the past 10 years, Circadian has asked managers of 24/7 businesses about certain key areas of their operation. One of the first questions posed to managers covering 168 hours a week with 4 crews is obviously the question of whether an 8-hour schedule or a 12-hour schedule is deployed. The US industry seems divided right in the middle. In the 2004 survey, 38% indicated 8-hour schedules and 39% reported working 12-hour schedules. The rest work some combination of the two or specialized schedules.

When the issue of 8s vs. 12s comes to the table, many managers ask if there is any evidence that one works better than the other. Obviously 8-hour shifts are shorter and leave more time for recovery between shifts. On the other hand, 12-hour schedules provide more days off between shift blocks. These longer breaks can allow better recovery than the shorter breaks on 8-hour schedules.

A recent study performed at the University of Psychology in Stockholm, Sweden, investigated this question. The study set out to investigate if longer working hours (like 12-hour shifts) with shorter rest periods between shifts (but a higher number of consecutive days off) affect sleep and sleepiness of the subjects.

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The study found no evidence that 12-hour shifts induced more sleep problems and sleepiness than 8-hour shifts. The scientists think that the longer breaks improved the possibility of recovery and counteracted the potentially fatiguing effect of the longer shifts. The factor that did show an effect on sleepiness was the shortening of the time off between shifts to 8 hours (i.e. a 16 hour day).

These findings indicate that longer shifts can be worked without negative effect if the amount of sleep obtained between shifts is not affected by the shift length. One consequence of this discovery is that overtime cannot be appended to a 12-hour shift without cutting into that sleep time. It also means that the shiftworkers need to be aware of the importance of sleep to ensure that the workers don't compromise on this sleep window in an attempt to achieve the same after-work activities after a 12-hour shift that are possible on an 8-hour schedule.

The study concludes that 12-hour shifts may be acceptable and show limited to no effect on the sleepiness measures. On the other hand, the study emphasized that a recovery period of less than 8 hours is not acceptable as it immediately affects the sleepiness and thereby the health and safety of the employee.

In Circadian's experience, how the schedule was implemented has more of an impact on performance and employee health. If the employees were involved in selecting a schedule that works best for them – it will result in lower turnover, absenteeism, and fatigue. The employees usually know if the workload in a 12-hour shift is feasible or not. Even with the best intentions it is impossible for management to predict why employees select a certain type of schedule over another. There are too many variables that play into this decision. Age, children, social activities and school are just a few of the factors that make every person prefer a different schedule type. But it is our experience that if the employees are asked about their preferences and these preferences are honored in the schedule selection, the resulting schedule will lead to fewer problems than a schedule that is implemented on management's directive. This fact far outweighs the differences between 8's and 12's and we have seen both kind of schedules being selected by the employees and being implemented and worked in all kind of industries.

In general, the scientific research is not entirely conclusive about 8s working better than 12s or not. This specific study found that it is not the shift length that determines sleepiness but the amount of sleep that can be obtained between shifts. As long as an 8-hour sleep period can be guaranteed, the length of the shift had little or no effect on sleepiness and performance. This seems to further manifest the fact that research has no evidence to suggest that 12's or 8's are better shift lengths. The study confirms that both schedule types are valid options on none should be ruled out before the employees can have their input.

Source: Stockholm University : <http://www.su.se>

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Q&A:

QUESTION: How do I make my disease management program meet the special needs of an extended hours operation?

ANSWER: