

The Dangers of Shift Work

More Americans than ever are working hours outside of the typical 9-to-5 workday. While there are advantages to flexible schedules, employees need to be aware of potential fatigue, strain on marriages and difficulties in arranging childcare.

Benefits

Employers have increasingly been willing to offer more flexible schedules of recruiting and retaining the best employees and boosting job satisfaction and productivity. This is especially true in fields with labor shortages. The National Federation of Independent Businesses surveyed companies with fewer than 100 employees about their hiring issues. Of firms that had no trouble hiring, 67% said the flexibility they offered was above average.

Workers, in turn, regard flexible work schedules as a valuable tool in balancing their busy lives. Some employees start early to have extra evening time in the evenings for family, while others prefer to start late to spend the mornings getting children off to daycare and school.

Shift Work – A Necessary Evil

Flexible schedules are also an offshoot of life in the 21st century. Consider that 800 numbers are often available nearly 24 hours a day, or that more and more Americans eat out, and at irregular times. And with increasing demands for these services comes an increasing need for workers willing to work non-traditional schedules.

For some workers, the nature of their jobs requires that they work a schedule other than a regular day shift – what may be called “shift work” or an “alternative shift.” Examples of shift workers include police officers, hotel staff, doctors, nurses and factory workers. These shifts are usually not flexible.

The Effects of Shift Work

While shift work may be a necessary evil for many that does not mean it doesn't have its share

of ill effects. In addition to the potential relationship and childcare problems mentioned earlier, shift work can also cause a number of adverse effects on one's health.

Shift work disrupts the internal body clock (referred to as circadian rhythm), affecting behavior, alertness, reaction times and mental cognition. It can lead to sleep deprivation, which results in fatigue, sleepiness and disorientation and has major implications for safety both at home and in work environments.

There are several reasons why shift work has a direct and immediate effect on sleep. First, ups and downs in circadian rhythms boost alertness in the morning, making it hard to obtain long blocks of daytime sleep.

Second, external forces such as noise, sunlight and family obligations often interrupt or cut short sleep. As a result, shift workers commonly get five or six hours of sleep after night shifts, compared to seven or more for 9-to-5ers.

What's less known is that along with quantity, sleep quality also suffers during the daytime. People spend less time in the deep stages of sleep, which are critical for recovering from physical fatigue. They also may receive less Rapid Eye Movement (REM) sleep, which is considered vital for mental health.

Shortened and poor quality sleep “may be implicated in troubles of the nervous system, changes in behavior, persistent anxiety or depression,” according to Dr. Giovanni Costa. “They can [also] act as an aggravating factor for other psychosomatic complaints or diseases.”

Higher rates of gastrointestinal (GI) problems are well documented among shift workers, with digestive problems such as constipation, diarrhea, excessive gas, abdominal pain and heartburn two or three times more common among shift workers compared to day workers.

A range of factors are believed to cause the elevated incidence of GI problems, with the main one being that people have difficulty digesting food during overnight hours. Other contributing reasons

include disturbed sleep, poor eating habits, overeating, excessive coffee, smoking and stress.

In addition, the general consensus among researchers is that shift work raises the risk of developing coronary heart disease (CHD) by 30% to 50%. For instance, nurses who worked rotating shifts for six years or more had an elevated risk of 51% for CHD. The risk increased by 21% for nurses with less than six years of shift work.

Moreover, several studies found a connection between shift work and high cholesterol. In one, rotating shift workers at a computer manufacturing company had significantly higher total cholesterol levels and slightly higher triglyceride levels than day workers.

The Importance of Perspective

But not all of these findings are conclusive. Second, health risks need to be kept in perspective. For many health risks, *non*-shift work factors such as smoking and a sedentary lifestyle lead to even *higher* health risks than working at night.

Perhaps most important, it's vital to remember that even an established increased risk of a health problem doesn't mean that any individual shift worker is destined to suffer health ailments. By doing all the right things: understanding how circadian rhythms work, making sleep a high priority, eating a healthy diet, and exercising regularly, individuals can significantly reduce their chances of developing health problems.

Consider Less Exhausting Schedules

While some schedules, such as 12-hour shifts, can quickly lead to fatigue, some workplaces offer less exhausting schedules such as "2-3-2" (two days on, three days off, two days on), "3-4" or "4-3" shifts. In such arrangements, employees always get three or four straight days off, meaning they're likely to have more time to catch up on sleep and still have a few days to enjoy leisure time.

Shift schedules, however, are never perfect and employees must be willing to make certain concessions. For example, in some schedules half the workers work every Saturday and Sunday; while another schedule might have employees working either Saturday or Sunday every weekend.

Impact on Marriages

While flexible schedules and shift work is largely a workforce issue, it can also be a relationship issue. In some cases, non-standard work schedules do not appear to contribute to marital instability for couples without children.

But for couples with children, it was a much different story. For men married less than five years and with children, working a night shift made divorce or separation six times more likely than if they worked the day shift (Presser, H., 1992-94). For women married more than five years and with kids, working a night shift made separation or divorce three times more likely, while working rotating shifts doubled the odds of divorce or separation.

Shift Work Advice

❖ *Encourage corporate clients to address childcare needs.* Some employers support efforts to identify childcare providers near the workplace or in neighborhoods where employees live. Other employers have set up on-site childcare centers to fit various work schedules. *An EA professional can lead a group discussion of strategies for finding childcare, managing non-traditional work schedules, and balancing work and life issues that benefit employee and employer alike.*

EA and HR professionals can start by developing a survey to compile an inventory of childcare resources, and determine existing childcare needs and what the best response should be. Ultimately, it is worth employers' time to develop such plans because it costs more time and money to advertise, interview, reference and background check, and hire new employees than it does to address childcare needs.

Additional Tips

The following are nine tips that the EAP can use to help minimize the health effects of shift work:

- Offer orientation and/or periodic training that covers circadian rhythms and coping strategies.



- Make sure shift workers have access to lifestyle programs aimed at improving diet, stopping smoking and exercising regularly.
- Provide 24-hour cafeteria service or make healthy snacks available around the clock.
- Permit on-the-job exercise and/or have an on-site exercise room.
- Make sure a mental health component is included in the company's EAP.
- Select a shift schedule that minimizes wear and tear on workers' bodies. (Possibilities for employers were listed in the "Consider Less Exhausting Schedules" section.)
- Have a room with cots or easy chairs where workers can nap before and after work.
- Make job applicants aware that shift work may exacerbate pre-existing medical conditions.
- Identify and treat shift workers who have sleep disorders such as sleep apnea and narcolepsy (Circadian Technologies, 2003).

Tips for Improving Sleep

Shift workers can also improve their chances of obtaining sufficient sleep by following these suggestions (mostly at home but also at work in some cases):

Bedtime Rituals

- Take a warm bath.
- Lower the room temperature (a cool environment improves sleep).
- Don't "activate" your brain by balancing your finances, reading a thrilling book, playing an intense video game, or doing other activities likely to make it more difficult to fall asleep.

Light

- Darken the bedroom and bathroom.
- Install light blocking and sound absorbing curtains or shades.
- Wear eye shades (e.g. a sleep mask)

Sound

- Wear ear plugs.
- Use a white noise machine, like a fan, to block other noises.

- Install carpeting and drapes to absorb sound.
- Turn off your cellphone.

Food

- Avoid caffeine less than five hours before bedtime.
- Don't stop for a drink after work; although at first you may feel relaxed, alcohol disturbs sleep.
- Eat a light snack before bedtime. Don't go to bed too full or too hungry.

Exercise

- If you exercise in the workplace, do so at least three hours before you plan on going to bed. Otherwise, exercise when you get up, after sleeping, because exercise is alerting and raises body temperature. This is why it shouldn't be done too close to bedtime.

Summary

While night shifts and flexible schedules have advantages, workers need to also be aware of the potential relationship problems, and mental and physical problems, that working non-traditional work schedules can cause. The EAP is in a perfect position to help.

References

Circadian Technologies (2003). www.circadian.com.

Costa, G., MD. (2003.) University of Verona in Italy.

Presser, H. (1992-94). University of Maryland.

Resources include:

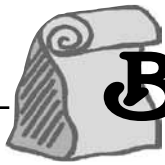
Child Study Center – <http://www.med.nyu.edu/child-adolescent-psychiatry/>

Circadian – www.circadian.com

MySleepCenter.com – www.mysleepcenter.com

National Sleep Foundation – <https://sleepfoundation.org>

No Shift Lag – www.noshiftlag.com



Health Survey

Choose the most appropriate response for each question in this survey.

Sleep

| | <u>A</u> | <u>B</u> |
|---|-------------|-----------|
| How many hours per day do you sleep when working days? | Less than 7 | 7 or more |
| How many hours per day do you sleep when working nights? | Less than 6 | 6 or more |
| How many hours do you sleep per day on days off? | Less than 7 | 7 or more |
| Do you often have trouble falling asleep? | Yes | No |
| Do you often have trouble staying asleep? | Yes | No |
| Do you have trouble sleeping during the day? | Yes | No |
| Do you use alcohol to help you sleep? | Yes | No |
| Do you use sleeping pills or other medications to help you sleep? | Yes | No |
| Have you ever nodded off while trying to stay awake? | Yes | No |
| Do you usually feel tired? | Yes | No |

General Health

| | <u>A</u> | <u>B</u> |
|--|-----------|-------------|
| Do you exercise regularly? | Yes | No |
| Do you smoke? | Yes | No |
| Do you eat healthy when working nights? | Yes | No |
| How many cups of coffee do you drink per day? | 4 or more | Less than 4 |
| Do you often suffer from heartburn or indigestion? | Yes | No |
| Have you been diagnosed with a cardiovascular condition? | Yes | No |
| Have you been diagnosed with a chronic physical condition? | Yes | No |

Family & Social Life

| | <u>A</u> | <u>B</u> |
|---|----------|----------|
| How would you rate the quality of your non-work time? | Low | High |
| Do you have difficulties with interpersonal relationships? | Yes | No |
| Does working shifts have a major effect on your mood at home? | Yes | No |

Responses in column A indicate need for further investigation. This survey is intended for guidance only and not as a substitute for medical advice or diagnosis. For specific advice, contact a physician.