



How Your Body Clock Works For or Against You

We are not a nocturnal species, no matter how hard we try. People are biologically programmed to sleep when it's dark outside and be active during daylight hours. This is called the circadian rhythm, or your body clock. Work schedules do not always align with the body clock, for example working at night or having an early morning start. Not only is body clock misalignment a safety concern at work, it can also cause or aggravate health problems such as depression, diabetes and cardiovascular disease.

Working or driving during the nighttime or early morning hours increases your likelihood of making mistakes, reduces your attention span, and decreases your vigilance – increasing your risk for incident or injury.

TIMING OF THE SLEEP-WAKE CYCLE

Your body secretes a hormone called melatonin to promote relaxation and sleep at night. Melatonin production ramps up at around 10 p.m. in order to get your body ready for sleep. Melatonin continues through the night to help you get restful sleep, and is at the lowest point at around 6 a.m. to help you wake up.

If you work or drive between the hours of 10 p.m. and 7 a.m., you may find yourself impaired due to body clock misalignment.

WORK SCHEDULES AND THE BODY CLOCK

You may work at night or in the early morning, or rotate shifts so your sleep schedule is often changing. You may have a second job that makes your workday very long. Any hours worked outside the range of 7 a.m. to 6 p.m. are considered to be shiftwork, and shift workers are especially vulnerable to the effects of misalignment with the body clock.

Night shift workers have to sleep during daylight hours when their family might be awake and at home and the neighborhood is noisy. Because of that, night shift workers are often sleep deprived. A National Safety Council survey found that 59% of night shift workers do not get the necessary 7 hours of sleep a day, compared to 45% of day shift workers.

If you're working or driving at night or the early morning, be very cautious when performing safety-sensitive tasks. Avoid driving if you have been awake for 16 consecutive hours, as fatigue sets in at this point. Being awake for 20 consecutive hours is the equivalent of being legally drunk.

If your schedule doesn't align with your body clock, there are ways to lessen the effect of the misalignment.

- **Have a dedicated place to sleep** that is dark, cool and quiet. If you must sleep during daylight hours, install blackout curtains or shades on your windows.
- **Don't drink alcohol or caffeine too close to bedtime.** Alcohol is a sedative that may help you get to sleep, but it interferes with the sleep-wake cycle. Caffeine is a stimulant that counteracts the relaxing effect of melatonin, and can last up to 8 hours in your system.

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5 Minute
Safety
Talk

FATIGUE AT WORK

EMPLOYER TOOLKIT



- **Turn off your screens well before bedtime.** The light from cell phones, computers and tablets keep your brain alert for a period of time after you turn them off.
- **Talk to your family about the importance of your sleep.** Even if you're home during the day, your sleep is a priority.

If these tips aren't enough to help you get 7 to 9 hours of sleep every day, you should talk to your doctor. He or she may recommend tests to determine if you have obstructive sleep apnea or other medical conditions that are affecting the amount and quality of sleep you are getting.

Being well rested, alert and ready for the workday ahead will help you maintain your health and stay safe at work.