Emergency medicine physician Rachel Dahms remembers well the exhaustion she felt during residency—working long strings of nights, being on call and trying to stay on top of cases with a fatigued brain and body. More than a decade later, she still recalls not being able to remember where she parked after working 28 hours straight. “The thought of walking through the ramp to find my car—it just put me over the edge,” she says. “You hit a wall and you can’t cope.”

Dahms still works her share of nights at Regions Hospital in St. Paul, where she is assistant residency director for emergency medicine. But she now has strategies for getting through the shifts. She shares those tips with her colleagues and the hospital’s emergency medicine residents, as she also tries to educate them about the importance of sleep.

Research shows working nights can affect sleep quality, heart health and metabolic stability, while boosting the risk of cancer, diabetes and depression. In addition, a growing body of evidence shows that shift work and sleep deficits can lead to poorer clinical performance and increase the risk that health care workers will make errors. One study from Harvard published in the Joint Commission Journal on Quality and Patient Safety in 2007 even likened being sleep-deprived to being intoxicated.

“Sleep deprivation makes you feel slow, and it causes all sort of problems from stomach upsets to heartburn, and an increased susceptibility to getting sick,” notes Dahms. “When you’re truly tired, you also have a decreased ability to express yourself and deal with frustration, and it’s harder to pay attention to detail or commit things to memory.”

Hours in the ER
About 15 million Americans have jobs requiring them to work evenings, nights or irregular hours, according to the Centers for Disease Control and Prevention. About 40,000 of them are physicians who work in the nation’s emergency rooms.

To help them cope, emergency medicine departments and physician groups are finding they have to be smarter about scheduling. Many groups and departments now allow doctors who would rather work nights to take a big chunk of those shifts, sparing others who prefer working mostly days.

Cullen Hegarty, MD, a Regions Hospital emergency medicine physician and emergency medicine residency program director, is one of those who prefers the night shift. He and two other colleagues cover most of them during the year. Other physicians work six to eight nights each quarter. He says Regions offers incentives to those willing to work nights. “They put an incentive behind it, like we’ll pay you more or decrease your hours to do nights, so that the rest of the group doesn’t have to do as many,” Hegarty says.

The situation is similar at Mayo Clinic, where three or four physicians regularly work nights, according to Jim Colletti, MD, program director of its emergency medicine residency program. Hennepin County Medical Center (HCMC) in Minneapolis also has a handful of physicians who work nights exclusively, by choice.

“Everyone knows working nights is part of the gig, but not everyone likes them,” says Marc Martel, MD, an emergency medicine physician at HCMC and associate professor of emergency medicine at the University of Minnesota. Martel says he prefers working nights for several reasons: “We get to pick our schedule.
a lot of the time. That works with my kids’ schedule and it works with my life.” In addition, he enjoys caring for patients challenged by psychosocial issues such as homelessness, mental illness and chemical dependency, and many of those patients show up in the ER at night.

**Staying on schedule**

Regions and HCMC allow their emergency physicians to set parameters around their preferences—for example, they might have 36 hours off after working a night shift or only work two night shifts in a row.

Some hospitals reduce the number of night shifts physicians are required to take as they get older. This acknowledges that it gets more difficult to switch between days and nights as people age. When Regions emergency physicians turn 50, the proportion of night shifts they work shrinks gradually (over five years) until they no longer have to work any, Hegarty says. At HCMC, however, there’s no such requirement.

Individuals have their own strategies. Hegarty, who prefers working three to four nights in a row rather than one night among a string of days, says as he heads into the first night, he wakes up early that morning to ensure that he can get in a solid nap before work. When his stretch of night shifts is over, he sleeps for a bit after work that morning, then tries to go to bed at a regular time that night. “That helps me reset back to my day schedule,” he explains.

Martel usually prepares for his night shifts by staying up late the night before and waking up early that morning to create a sleep deficit. He might do administrative work or attend a meeting at the university in the morning. Then before his shift he’ll sleep about six hours, wake up, exercise and eat breakfast (including coffee) before going to work.

**Residential treatment**

Of course, all residency programs have been required to abide by work-hour limits since 2011. Minnesota’s emergency medicine residency programs have applied the new rules variously. Colletti says residents at Mayo do not work more than 10 hours at a time in the ED and have eight to 10 hours between shifts. At Regions, residents now have at least eight to 10 hours off between shifts and one full day off each week.

HCMC prevents residents from working more than 10 hours at a time in the ED, then gives them the corresponding amount of time off after their shift. The hospital aims to cluster residents’ night shifts in three- to five-day blocks, so they aren’t switching back and forth between days and nights. Residents also cannot work more than five days straight; after five days (or nights), they get two consecutive days off, Martel says.

Emergency medicine residency programs now provide training on how to maintain healthy sleep habits when working nights. Residents at Mayo are taught to load up on sleep before an anticipated night shift. They are also encouraged to avoid heavy meals, wrap up exercise at least three hours before they need to sleep, and sleep in a cool, dark and quiet environment, Colletti notes.

Dahms teaches residents at Regions how to nap correctly, as some naps are more effective than others. She either recommends a short (less than 20-minute) nap to prevent them from entering deeper sleep cycles or a 90-minute nap to get them through one full sleep cycle. Waking up in the middle of deep sleep makes people feel even groggier than they did before they napped.

She also suggests that if they drink coffee, tea or other caffeinated beverages to do so at the beginning or during the middle of a shift. They should stop caffeine intake about three hours before the end of a shift, unless they plan to stay awake when they get off work and sleep right before their next shift. She also tells residents to wear sunglasses when going home to prevent the sun from telling their bodies that it’s time to wake up.

Dahms says residents often ask about using medications to help them stay awake or sleep. She recommends using them strategically, such as when they are having major, recurring problems with falling asleep or staying awake, and that they take them under the direction of a physician. “It’s not just sleep deprivation from doing shift work. Some night shift workers have trouble with insomnia and excessive sleepiness,” she says. “Sometimes when it’s your body’s time to sleep, you can’t get to sleep.”

Colletti says faculty at Mayo are told that if they notice a resident is showing signs of fatigue (see box) they should bring in back-up coverage to the emergency department and encourage the resident to use Mayo’s reimbursed round-trip taxi service to get home.

“The tricky thing is that being sleep-deprived affects your judgment and you don’t notice that you’re tired or making mistakes until someone points it out to you,” Dahms says. “Having that extra awareness of what happens when you’re sleep-deprived, knowing that it’s a reality, it helps people be more aware when it’s happening to them.”

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