

Rotating shift workers have lower levels of serotonin

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People who work rotating shifts have significantly lower levels of serotonin, a hormone and neurotransmitter in the central nervous system believed to play an important role in the regulation of sleep, according to a study published in the August 1st issue of the journal SLEEP.

The study, authored by Carlos J. Pirola, PhD, of the Universidad de Buenos Aires, Argentina, focused on 683 men of self-reported European ancestry, in which 437 day workers were compared with 246 rotating shift workers. Day and night work periods started at 6 a.m. and 6 p.m. respectively. None of the subjects interchanged their job schedule.

The results showed that serotonin content differed greatly between day workers and rotating shift workers, with levels of serotonin significantly higher in day workers.

“These findings may be important not only to understand the mechanisms related to the circadian rhythm desynchronization imposed by the rotating shift work regime, but also to target truly effective therapeutic strategies that may ameliorate the associated comorbidities and behavioral problems in rotating shift workers,” said Pirola.

In addition to sleep problems, low levels of serotonin are also associated with other conditions such as anger, depression and anxiety.

Shift work sleep disorder is a circadian rhythm sleep disorder that occurs due to a work schedule that takes place during the normal sleep period.

This schedule requires you to work when your body wants to sleep. Then you have to try to sleep when your body expects to be awake. The timing of when you sleep and wake is much different than what your internal body clock expects.

This sleep problem causes you to have trouble sleeping or to be severely tired. It is most often reported due to the night and early-morning shifts. These workers typically sleep one to four hours less than average. They also feel that the quality of their sleep is very poor. They do not feel refreshed when they wake up. This can hinder their performance at work. It can also make them less alert. This can put them at risk of an injury on the job.

Sleep problems from shift work affect male and female workers of all age groups. Those who have unusual work hours are most likely to have it. Estimates are that two to five percent of the general population is affected.

Those who suspect they might be suffering from shift work sleep disorder, or another sleep problem, are urged to consult with their primary care doctor or a sleep specialist.

Source: American Academy of Sleep Medicine

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