

THE MIND THAT WORKS THE NIGHT SHIFT



“
Each night, when I go to
sleep, I die. And the next
morning, when I wake up,
I am reborn ”

— Mahatma Gandhi

What do Donald Trump, Margaret Thatcher, Benjamin Franklin, Thomas Edison, Nikola Tesla, Indra Nooyi, Elon Musk and Shah Rukh Khan have in common? These are all reputed personalities, known for barely sleeping 3–6 hours per night. When Edison was proclaiming that genius is one percent inspiration and ninety-nine percent perspiration, was he hinting at sleeping less and working longer? Today, we heatedly debate whether a 90-hour work week improves productivity and economic growth or whether it leads to a catastrophic work-life balance and burnout. However, no one seems to be debating how many hours of sleep are essential for physical and mental well-being. Ideally, we are meant to sleep eight hours a day. This would mean that one-third of our lives should be spent sleeping in order to recharge our minds and bodies. Recall, when was the last time you had a blissful, uninterrupted, refreshing sleep? Was it yesterday, last week, last month, last year or perhaps during your school summer vacation? Are you among those paranoid ones who check their phones multiple times at night to ensure that everyone under their care is alive and kicking? The fact of the matter is that sleep is the most neglected health issue. We rarely talk about it with our patients, friends or family.

Imagine a surgeon who starts following these celebrities and decides to work more and sleep less. Does it impact his decision-making, dexterity, technical skills, focus or attention span? Do the

operative times become longer, and do the error rates jump up? Sleep deprivation has a hand-in-glove relationship with burnout, depression, cynicism, apathy and lack of empathy. It leads to reduced appetite, exhaustion and a ‘paradoxical insomnia’. These make a silent entry through the back door and then become permanent residents. A 1972 study revealed that 80% of sleep-deprived residents had difficulty in executing planned manoeuvres and a diminished proficiency in carrying out routine procedures. The 1984 Libby Zion case was a moment of awakening. An 18-year-old patient was admitted to a New York hospital with complaints of fever and agitation. A sleep-deprived junior resident and an intern attended to her, and she died within a few hours. Her father, who was a lawyer, sued for medical negligence and impaired judgment because of the doctor’s fatigue. The case made media headlines, the hospital was held responsible for the residents, and ‘the Bell Commission’ emerged as the first regulatory order on work hours for residents. These were later adopted by the Accreditation Council for Graduate Medical Education (ACGME) for the entire American nation. The resident work hours were fixed: 80–88 hours per week and not more than 28 hours at a stretch. A meta-analysis of thirty-three studies has revealed that the technical skills of a sleepy surgeon decline by 11.9% to 32%. This does not have a strong association with age, seniority or proficiency. Hospitals require a

24 x 7 x 365 coverage, night shifts, and on-call rota depending on patient inflow, complexity of surgeries and manpower. The financial implications for an organisation include higher attrition rates, more litigation for errors, and reduced productivity.

Lack of proper sleep also disrupts the hypothalamic-pituitary-adrenocortical (HPA) axis, and the serum cortisol levels are higher even after one single night of sleep deprivation. These result in physiological derangements, including hypertension, impaired blood sugar, reduced immunity with decreased killer cell activity, as well as an early onset of dementia. It also takes a toll on personal lives with increased alcohol consumption, depression, higher divorce and suicide rates. Women residents have higher infertility and pregnancy-related complications.

The other end of the spectrum is a doctor who dozes off in the middle of a conference. It can only mean two things: either the speaker is too boring or that he himself is suffering from sleep apnoea. He needs to go home and check with his wife if he snores. If he looks like Mr. Pickwick from Dickens' novel, has a short neck, a potbelly and a constant feeling of fatigue after an entire night of sleep, he should straight away get a polysomnography done. It is not just impacting his marriage but also making him prone to strokes and heart attacks. When he laughs, the world laughs with him; when he snores, he sleeps alone.

Then, there are those who just can't fall asleep, stay asleep and wake up too early. There is a very high prevalence of insomnia amongst doctors and nurses. It has only worsened after the pandemic. A cross-sectional survey of 1004 participants in a tertiary care hospital in China showed that 47.7% of doctors and 51.3% of nurses suffered from insomnia. It is higher among those with no physical activity, who smoke, use alcohol and consume more than three cups of coffee per day. Exposure to patient suffering and death, as well as workplace violence, is also responsible. The other reasons may be jet-lag for the high-flying surgeon, late-night parties, binge-watching serials and an addiction to social media. Insomnia occurring thrice a week for at least three months or longer needs evaluation and definitive treatment. Check for gastro-oesophageal reflux, thyroid disorders, anxiety, depression, or medications that interfere with sleep.

There are some of us who are movers and shakers. We have an incessant desire to shake our legs at night. Our neurology colleagues call it restless leg

syndrome. Then there are those like comedian Jimmy Kimmel who can sleep at the wrong places at the wrong time due to narcolepsy. In this instance, the brain is unable to regulate the sleep-wake cycle, causing sleep attacks. It may be associated with sudden muscle weakness and falls (cataplexy). Sleepwalking, sleep-talking, bed-wetting, night terrors and circadian rhythm disorders are forms of parasomnias.

Does this sound like my story or yours? Perhaps what is needed urgently is to develop a sleep-wake schedule for weekdays and weekends. Remove the clutter from the bedroom. Your bedroom is to be shared with your spouse, not with your laptop and your mobile. Cricket and over-the-top (OTT) platforms are more addictive than alcohol and smoking. Caffeine is fine in medical college for burning the midnight oil, but not in routine life. Pooris, paranthas and alcohol cannot be part of the dinner menu. Supper is a good idea. Exercise, reading, music and a warm bath do help. Over-the-counter medication may be used as a short-term measure, but beware of addiction potential. Melatonin has been recommended as a good option, but a recent paper cautions against long-term regular use, which 'may be associated with heart failure'. Cognitive Behavioural Therapy (CBT) may help fight disruptive thoughts. Don't feel embarrassed to seek help if you think you have sleep apnoea. Polysomnography and Multiple Sleep Latency Test (MSLT) are required to diagnose sleep disorders. The best solution for sleep apnoea is weight reduction and avoidance of alcohol. Otherwise, custom-made oral appliances and continuous positive airway pressure (CPAP) have made the quality of sleep so much better. The CPAP machines have become compact, efficient and easy to carry along on an international trip too.

Our work is demanding. Fortunate are those who sleep soundly.

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