

IN CONCLUSION

Humans are just not designed for night shift work. Therefore, it's natural to face hardships and challenges working this kind of schedule. Nonetheless, there is still a window of opportunity for minimizing adaptation issues and other health risks by using strategies that will allow you to sleep better and provide a certain stability to your biological clock and by adopting a healthy lifestyle.



ADDITIONAL PATIENT BROCHURES BY SLEEP EXPERTS

- Dental Appliances
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- Drowsy Driving
- Insomnia
- Human Circadian Rhythms
- Strategies for Night Shift Workers
- Narcolepsy and Cataplexy
- Dreams and Nightmares
- Obstructive Sleep Apnea
- Patient Guide to Sleep Studies
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- Children
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- Sleep and Post-Traumatic Stress Disorder
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“HEALTHY SLEEP FOR HEALTHY CANADIANS”

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Canadian Sleep Society



Société Canadienne du Sommeil

STRATEGIES TO STABILIZE YOUR BIOLOGICAL CLOCK

Adjust the biological clock of night shift workers. It is very rare when the biological clock gets adjusted to one's night shift working hours. In fact, even if the worker stays awake throughout the night and sleeps during the day, the rest of the day-night indications, especially the light-dark cycle, will still remain the same, preventing a complete adjustment for the biological clock. During each schedule change, the central biological clock and all other small biological clocks located all around our body try to resynchronize, but they all do this at various speeds, causing a state of internal desynchronization. Although not yet formally demonstrated, there is a growing perception that it is this state of internal desynchronization that is most harmful for our health, mostly when it occurs repeatedly over many years. Therefore, rather than trying to force a complete adjustment which will be needed to be restarted with each schedule change, current recommendations preferably focus on a partial adjustment, capable of providing a certain stability for our body's biological clock. The best strategy to reach this goal varies depending on when one chooses to sleep during a night shift.

Sleep after the night shift. For most people, going to bed as soon as possible after their night shift will ensure a longer and a deeper sleep. This sleeping schedule has an added benefit of setting aside time, sometime in the afternoon and evening, for friends and family.

If possible, plan a fixed duration (for example from 9 am till 11 am in the morning) which will always be dedicated to your sleep, both during working days and days off. This regular sleeping period helps stabilize the biological clock and allows you to sleep better after the night shift without causing major disruptions during days off. To facilitate sleep and the partial adjustment of the biological clock using this strategy, it is important to avoid exposure to morning light, between the end of your night shift and bedtime. Therefore, you will need to wear sunglasses to avoid stimulating your biological clock at this time of the day. Increasing exposure to light in the evening and during the first half of the night shift will be also beneficial. Sleeping in the darkest possible room is also essential.

Sleep before the night shift. Another possibility to consider is to have your main sleep before going to work, for example from 3 pm till 10 pm. This option is rarely chosen by young night shift workers, but it could prove appropriate for older people or for those who are naturally early birds.

This strategy gives you the advantage of reducing fatigue during the night shift and allows you to benefit from sunlight, especially in winter.

Moving onto a daytime schedule will also be easier. On the other hand, it is important to have a good nap before your first night shift. This could be a suitable strategy for a night worker who has always slept after his night shift but begins to face adaptation issues around the age of 40. To employ this strategy, being exposed to the morning light is beneficial (a great time for jogging!), but during summer, you must wear a pair of sunglasses in the evening. Once again, sleeping in the darkest possible room is also essential.



ADOPT A HEALTHY LIFESTYLE

Because night shift work can have many potential negative effects on your health, it is important to minimize all other risk factors in your lifestyle to the greatest possible extent.

Night shift work appears to multiply the harmful health effects of other risk factors, particularly those associated with smoking, not exercising and obesity. Regular physical activity and a good balanced diet are therefore particularly important for night shift workers. It is advisable to avoid eating heavy and high-fat food, especially at night.

Since health problems can increase with age and the duration of exposure to night work, it is recommended to get a regular medical follow-up (annually if possible). Informing your doctor about your work schedule can make it easier to identify and prevent potential problems.



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Strategies for Night Shift Workers

CHALLENGES WITH NIGHT SHIFT WORK

LONG-TERM ISSUES WITH NIGHT SHIFT WORK

STRATEGIES TO REDUCE SLEEP DEPRIVATION

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National Campaign SLEEP ON IT!

This Canadian public health campaign is about sleep. It explains everything you need to know about sleep and it offers solutions to members of the public who suffer from sleep disorders.

For more information: www.sleepontitcanada.ca

CHALLENGES WITH NIGHT SHIFT WORK

It is a commonly known fact that working many hours is known to have an impact on one's sleep-wake cycles, but among others, the most challenging is the night shift. In view of the fact that we belong to diurnal species (active during the day), our biological clocks send a powerful signal to keep us awake during the day. Therefore this makes it extremely difficult for night shift workers to sleep well during the day. In fact, this is why night shift workers most commonly complain about lack of sleep and fatigue.

On average, a night shift worker sleeps for nearly one and a half to two hours less every day than a daytime worker. This lack of sleep accumulates within the course of several working nights and cannot be entirely recovered during days off. Consequently, this lack of sleep can accumulate over the years and may contribute to the development of certain health problems.

The biological clock not only controls our sleep cycle, but also all other body rhythms, including the rhythms of various hormone levels and those related with the assimilation of food. For example, the melatonin hormone is normally secreted at night and facilitates sleep, whereas the cortisol hormone which peaks in the morning, promotes wakefulness.

For the night shift worker, this means that melatonin will increase drowsiness during work, and cortisol will disrupt daytime sleep.

In addition, the biological clock schedules our body in such a way that it should receive food during the day and not during the night. Therefore when meal hours are adjusted in order to meet the requirements of a night shift, digestive problems can be often experienced, in the form of a disturbed appetite or an increased blood cholesterol level.



LONG-TERM ISSUES WITH NIGHT SHIFT WORK

Poor sleep and digestive disorders tend to become more frequent and more severe after 4 to 5 years of fixed or on rotation night working.

Age is also a significant factor: as we get older, it becomes more difficult to sleep during the day. This is why employees who've worked at night for nearly 20 years without much difficulty encounter difficulties when they reach 40. This being said, it is also important to know that not all people experience hardships working at night and these employees can do so without any problem throughout their working life.

We believe that these people represent approximately 10 per cent of night shift workers. In most cases, these workers are natural "night owls", with a spontaneous tendency of going to bed and waking up at late hours. They often require less sleep, which means that they feel rested and alert with as little as 6 hours of sleep a night. They are naturally strong and seldom sick.

Over the past 10 years, several studies have shown that working at night for a number of continuous years could aggravate certain risks in the long-term, particularly in relation with cardiovascular diseases, metabolic problems such as diabetes and certain cancers. However the exact duration of the night shift experience which may increase these risks is yet to be found: some studies say 15 years, others suggest that it's more than 25 years. Similarly, the exact cause for the increase of these risks is as yet unclear, but it's more likely that lack of sleep and disruptions in the biological clock are involved. Hence, strategies to facilitate the adaptation to night shift work and thus reduce the risk of developing health problems will principally focus on overcoming lack of sleep and on stabilizing the biological clock.



STRATEGIES TO REDUCE SLEEP DEPRIVATION

- **Give more priority to sleep.** What you really need above all, is always a good sleep. It is absolutely essential that one must prioritize one's sleep above all other things and this includes family, friends, shopping, household and even golf! Sleep deprivation can reduce your energy, distort your mood, and contribute to hormonal upheaval. There is also evidence that lack of sleep increases cardiovascular risks and metabolic disorders in the long-term and contributes to weight gain and obesity risks. Therefore you must try to sleep as much as possible before and after your night shift, and make sure to catch up on lost sleep during your days off.
- **Control your environment.** Even if sleeping during daytime can turn out to be quite difficult due to the wake up signal of your biological clock, you can always control certain factors and significantly improve the quality of your sleep. Opaque curtains for your bedroom windows are essential both for your sleep as well as for your biological clock. You can also get an air conditioner: this will make it easier for you to sleep in a fresh environment and the air conditioner's white noise helps cover certain undesirable ambient noises. Certain night shift workers successfully use a basement room when they sleep during the daytime: it's fresher, darker, and is often calmer than their usual rooms. Minimize interruptions during sleep: explain to your family and friends that your sleep is extremely important and that it should not be disturbed. Disconnect ringtones and forward your phone calls to your voicemail.
- **Maintain a regular sleeping schedule.** Always try to sleep at the same time when you work at night. This promotes a better sleep and helps your family members and friends not to disturb you at this time of the day. Maintain the same routine before bedtime, whether you are sleeping during the night or at daytime: for example, brush your teeth, wear your pajamas, read a few pages of your bedside book, etc. Keeping always the same routine helps your body and mind get ready for sleep. The last thing you'd want to do is doze off on the sofa in front of the television.
- **Take a nap.** Sleep as much as you can. If possible, take a nap during the evening before going to work. You will decrease the lack of sleep and enhance your attention span at work. Even if you do not fall asleep, a one-hour nap in a dark and silent room will help you feel more rested and relaxed. In certain working environments, taking a small nap

during the night at a meal break is allowed. If this is your case at work, see if it suits you. Some people find that a 20-30 minute nap regenerates them and helps them complete their night shift successfully. For others, it's the opposite: after a nap, they feel rather confused and sleepy (also known as "sleep inertia"). If this happens to you, you are recommended to avoid taking a nap and instead replace it with a peaceful moment of relaxation.

• **Limit caffeine, alcohol and hard-to-digest foods.** Avoid taking caffeine at least 5 hours prior to your bedtime. Not only does this include coffee, but also tea, energy drinks and chocolate as well. Respecting this recommendation could most likely be a rather difficult task, for this means that your last cup of coffee will be taken in the middle of your night shift and that you could feel the need to take a stimulant later, particularly for the trip home. The problem is that caffeine remains in the blood for a long time. Caffeine will generally not prevent you from falling asleep, since you'd already be very tired by the end of the night shift. However, your sleep will be less deep and you will wake up more often. A similar phenomenon also occur with alcohol: a glass or two can help you relax after work, but your sleep will be less refreshing. Take a light but nourishing lunch before going to bed (for example high-fiber cereal accompanied with dried fruits and nuts) and avoid fat and spicy food. You will sleep better and will not be woken by hunger too soon.

• **Try not to rely on sleeping pills to sleep during the day.** Trouble getting to sleep during the day after the night shift is not a transitional problem, but a chronic issue. Regularly using sleeping pills to overcome this problem increases your risks of tolerance and dependence and can disrupt your night-time sleep on your days off. However, you still need to sleep as much as possible and, having discussed with your doctor; you could decide on occasionally using a medication. Some night shift workers find that taking melatonin (3mg) before bedtime helps them sleep better at daytime, but scientific results on this subject are rare and contradictory. Based on current knowledge, there does not appear to be any contraindication or a risk of dependence, hence you could give it a try and see if it helps you.

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