

## Tips for Night Shift workers

### **Background**

If you have ever done a Night Shift for whatever reason you will have experienced the impact on your sleep. Even with careful planning, it is never easy as it's always naturally harder for us to sleep in the day than at night. This is largely due to the mismatch in light cues versus the timing of our Body clock or Circadian Rhythm. In addition, suddenly adjusting to a different bed and wake time throws this Rhythm out of alignment. Here, with both our sleep quantity and sleep quality being maximised by a regular bed and wake time, those doing Night Shifts will often get poorer sleep.

The key to minimising the impact of a Night Shift on your sleep is to have a plan which suits your individual needs. It's also worth making sure that you start from a strong base of healthy sleep and good sleep hygiene.

### **Shift work sleep plan**

There is a huge variation in the timing, duration and variability of Night Shift work patterns. However, the principles of how to build a night shift plan for yourself are the same for any pattern. Whilst the success of the recommended building blocks will vary according to personal needs, a successful plan should include four separate stages of pre-night shift, during night shift and post night shift routines.

### **Before night shift**

This stage of the plan is to minimise your sleep debt, whilst adjusting your body clock in the direction of your nightshift sleep pattern.

One of the building blocks of this stage is to aim to move your sleep-wake cycle towards your night-shift time as much as possible. Our body clock simply isn't set up to adjust by huge amounts in a single 24-hour period, but can adapt to an hour a day. So, going to bed and rising an hour later each night over a couple of nights would be a great start. If you can ask to start your nightshift on a Monday, you could do this over a weekend. Adjust your mealtimes at the same time as this also helps shift your body clock too.

Then on the morning of your night shift don't set an alarm and lie-in as late as possible. This helps minimise any potential sleep debt as your body will naturally give you the sleep you need.

In the afternoon before your first night shift take a nap to 'put sleep in the bank' for working through the evening. A logical time to aim to nap would be in the Siesta period just after lunch when we have a natural propensity to feel tired. If possible, nap for a full sleep cycle of 90 minutes sleep, as this would include all the stages of sleep (including Deep and Rapid Eye movement).

Another thing to consider is the timings of your meals before your night shift. Ideally eat in line with your new meal schedule.

## During night shift

The key building blocks for optimising your cognitive performance during a night shift are napping, caffeine, lighting, and mealtimes

Napping is a good way to keep your mind alert during your nightshift. Aim for 10–20-minute power naps though, in order to avoid 'sleep inertia' or grogginess which can occur with longer nap times.

Caffeine can also help in terms of combating tiredness and improving cognitive performance. Its effects peak about 20-30 minutes after consumption and has a 6-hour  $\frac{1}{2}$  life, meaning that it takes 6 hours to eliminate  $\frac{1}{2}$  of its effect. It's best to avoid its use towards the end of a night shift as it would then keep you awake when trying to get to sleep. I recommend having smaller cups of coffee throughout the night if needed rather than a large mug in one go. Also, ideally, have your last cup of coffee at around 8 hours before your planned sleep time especially if you are sensitive to caffeine.

If you can get the time and feel energetic having some exercise during a nightshift can also give you a boost as it increases cortisol levels. A quick jog for example should wake you up

One of the key signals for sleep is the absence of light which stimulates the production of Melatonin. Melatonin is the hormone which gives us the 'desire for sleep' and helps set the body clock. In theory, having the lighting as bright as possible during the nightshift will help diminish this effect and reduce your sleepiness.

With regards to when to eat, our digestion has its own circadian rhythm which will be operating in line with your overall body clock. You will therefore be set up to feel hungry during the daytime (which will be your new sleep time). However, your digestive system is set up to wind-down at night, which would be during your night shift. Therefore, aim to eat your main meal before your first night shift, then, if needed, have a lighter meal during the shift to keep your energy going. Ideally keep your food intake as low and as light as possible during the nightshift. The key is to avoid having a large/heavy meal before going to sleep after your nightshift has finished. This would most probably keep you awake, but certainly is running against the direction of your desired metabolism in line with your nightshift wake/sleep pattern.

Smoking is another thing to avoid close to bedtime as it's a stimulant. On the way home you could consider using public transport rather than driving, especially if you feel tired. The key on the run up to your sleep time is to mimic night-time by avoiding light exposure. So, wear sunglasses on the way home, even on a cloudy day.

With regards to the commute home itself it's well known that there are far more accidents on the way home from the shift than to it. Equally that the likelihood of an accident is highest when driving home from the first night of the shift. Apart from using public transport or a taxi you could consider sharing the driving with a colleague. If you are feeling especially tired certainly don't drive. Have a nap at work before you set off. Strategies to increase your alertness could also be considered such as caffeine, exercise, and bright lights. Even if this then makes it harder to fall asleep, safety must come first. Always pull over if you feel drowsy when driving.

## Sleeping between shifts

The main problem with adjusting to nightshifts is that all the internal systems of your body will be set at your 'old circadian rhythm' with your body-clock set at an opposing day/night pattern. Large phase shifts create symptoms of jetlag, similar to long haul travel as the different systems and organs in the body try to adapt.

In fact, if you are doing a short-term rotating system, it's unlikely that your body clock will be able to fully adapt during the nightshift period and you will undoubtedly not get enough sleep as normal. The key therefore is to maximise the amount of sleep you get during the day to try to combat this.

It's always going to be difficult to sleep in the day as there are lots of factors working against this including light and your social needs.

As per normal sleep hygiene advise it's always recommended to avoid computer screens, laptops, and phone screens/apps before bed. Not only do they emit blue light (which stops Melatonin production) but they stimulate us, and we always tend to spend longer on them than planned. Have a set relaxing routine such as a warm bath, reading a book or doing some meditation to help you wind-down before bed.

With regards to timing of sleep, the general advice is to aim to sleep as soon as you arrive back from work. However, this doesn't work for everyone, and the key is to find what works for you. You might prefer to stay up and then sleep before the next shift. Or you might have a nap when you get back, with your main sleep before your nightshift. A successful sleep strategy would vary according to length of shift cycle too. With a long nightshift cycle, you would have more time to acclimatise to the new hours. Once you have found your optimum sleep schedule for nightshifts try to keep to it, as this will make it easier to get the best sleep quality and quantity. Consistency is king here. The overall aim throughout remains the same, which is to minimise sleep loss (or sleep debt). In a 24-hour period the recommended sleep for adults is between seven to nine hours so always aim for this if you can. Of course, some of us need less and some more sleep, but don't go more than 10-11 hours or fewer than 5-6 hours if you can.

Make your bedroom, like a cave, cool dark and quiet. The ideal temperature to initiate sleep is quite cool, at around 65 degrees Fahrenheit or 18.3 degrees C. Black out blinds would be a great investment for anyone doing regular nightshifts, or eye masks if not. Ear Plugs too come into their own, or a white noise generator to mask background sounds and noise leakage.

Ask your family for support with your daytime sleep schedule by being mindful of noise around your bedroom. Make everyone aware of your desired sleep time and tell them not to wake you up unless in an absolute emergency. You could even update neighbours too if you think their noise could affect your daytime sleep.

You could consider asking your GP for a prescription of Melatonin which can help reset your body clock towards your new sleep/wake time. I would avoid sleeping pills though as you can

develop dependency and as with alcohol, they sedate us rather than help us get 'quality sleep'.

Then as soon as you wake up make it as bright as possible and get some exercise (preferably outside). Getting daylight will help reset your body clock to your new day/night cycle. You could even use a SAD lightbox (at a setting of 10,000 Lux) to help in this process.

### **Resetting your body clock**

Getting back on track is a balancing act of aiming towards your normal sleep/wake cycle without losing even more sleep. Getting bright light first thing, as explained is a big sleep cue, and change your meals back to your normal schedule too. If needed take naps of full sleep cycle of 90 minutes, or even 3 hours but avoid taking these in the afternoon. If taken too late naps would remove your sleep pressure or need for sleep. The key is to aim to get to sleep as close to your normal sleep time as usual. Exercise and meditation are two components of sleep quality and sleep quantity so add these into your routine too.

### **Additional Shift work tips**

Working nightshifts that differ from the routines of friends and family can leave you feeling isolated, and it is important to make the effort not to lose contact with them. Look for times that you can have social activity both during and between shifts. Weekends off become even more precious. Maybe look to link-up with others who are doing nightshifts too.

### **Shift work rotation**

Always try to shift your sleep pattern in the direction of your next rotation. As mentioned at the start of this text if you are going from a day to night shift try to delay your bedtime by an hour (or even two) over consecutive nights. If you can get a schedule which moves from daytime to afternoon to evening, then back again. This would be a more natural, and easier rotation to manage than having shift rotations going in the other direction.

Always talk to your company if you are finding that working shifts is wearing you down and seek medical advice too.