

The Impact of Shift-work on Sleep

Working shifts has been implicated in increased accidents, reduced performance and quality of life, and with increased morbidity and mortality rates in shift-workers. These are exacerbated by the longer time spent working shifts, the rapidity with which those shifts rotate, and the more antisocial the hours worked (e.g. night-shifts). Increased stress hormones (especially cortisol) are implicated in this increased morbidity and mortality and are most certainly driven by inadequate amounts of sleep and continually adjusting and readjusting the circadian rhythm.

A consistent routine is an essential part of a healthy sleep (and wake) pattern. With a consistent routine, the circadian rhythms of sleep / wakefulness (alertness) and body temperature become synchronised, or entrained to each other. Concurrent dips in body temperature and alertness culminate in a strong signal for the induction of sleep (in the late evening), and concurrent rises in body temperature and alertness culminate in a strong signal to wake (in the morning). Rotating shift patterns disrupt the synchrony between these two rhythms, making sleep less easy to induce and to maintain. Thus, people living with frequently rotating shift patterns are continually disrupting the synchrony of their circadian rhythms and their sleep often suffers as a result.

Here are a few tips for people who work shifts, to help to maintain as healthy a lifestyle as possible and to protect their sleep as much as possible:

Managing the Change

- Adapt to the new routine as soon as possible.
- Even before the shift-change, begin by 'going half-way' for a couple of nights before the shift change.
- Manage sleepiness at work with relaxation techniques / power napping during breaks.
- If your working practices include physically and not so physically active duties, attempt to synchronise these activities so that whatever shift you work your activity levels remain as consistent as possible with your 'natural rhythm'.

Caffeine Consumption

- Drinking coffee / tea can offset tiredness and fatigue, however consumption should be:
 - Moderate
 - Avoided in the 4-hours before bedtime
 - Topped up only after approximately 4-hours
- The effects of a caffeinated drink may not last beyond four hours
- There may be 'rebound' tiredness after four hours post-consumption

Stimulant Drugs

- Stimulant drugs should not be consumed without the express direction of your GP and should only be taken in moderation and only when strictly necessary.
- Should be avoided if possible.
- Napping, relaxation and caffeine strategies should be used in the first instance and can be highly effective without resorting to medication.

Managing Your Health

If you do feel excessively tired a lot of the time:

- Consult with your managers about the possibility of working more flexibly.
- Try out relaxation exercises.
- Optimise your sleeping practices at-home.
- Be aware that shift-working does not 'agree' with everyone.
 - Some people are naturally more resilient to circadian phase shifting (particularly younger people).

Read More in:

Teaching the World to Sleep: Psychological and Behavioural Assessment and Treatment Strategies for People with Sleeping Problems and Insomnia.

By David R Lee
Routledge, London.