

Newcastle Regional Sleep Service

Sleep disturbance and fatigue with shift work: a self-help guide

Introduction

This leaflet has been written to help people who suffer from sleep disturbance and fatigue due to shift work. It will help you to understand how your body clock works and the best ways to improve your days and nights at work.

We have all become used to a 24/7 society where hospitals, banks, offices, supermarkets and gyms are all open for longer and longer hours. This means that more and more of us will spend time working beyond a traditional nine to five pattern. We need to think about the effect this will have on our own health and potentially the people we look after. Shift workers are far more likely to have disturbed sleep and daytime fatigue and sleepiness compared to non-shift workers (up to 60% compared to 5-10% of the general population).

What is shift work?

Working outside “normal working hours” and in particular working during times when we would normally be asleep. Very early starts that decrease the amount of time we spend in bed or working patterns that change from one week to the next. Shift work will also include prolonged work periods over 10 or 12 hours where we might have to keep up a high level of concentration.

Why is shift work difficult?

Humans have evolved on a planet with a 24 hour day-night cycle so everything our body does has a day-night rhythm. One of the most obvious daily rhythms is sleep and wake. However there are lots of other important rhythms that change over the day including for example; our blood pressure, how much stomach acid we make, how we control our appetite and our blood sugar levels.

We are programmed to be awake in the day when it is light and to feel sleepy and go to sleep at night for about seven to eight hours when it is dark. Social cues such as work, exercise, eating and drinking can all make us feel more awake but the biggest timekeeper for our body clock is sunlight. So we find it much harder to fall asleep in the day and to stay awake during the night.

We need sleep for our memory and mood and many other functions, but shift work can lead to less sleep in total and also sleeping at the wrong time, which is then more disturbed.

Research has shown that there are a number of problems associated with being a shift worker, particularly for those covering the nights or with early morning starts. For example, shift work may result in:

- Disruption of the internal body clock.
- Increased weight.
- Fatigue.
- Sleeping difficulties.
- Disturbed appetite and digestion.
- Reliance on sedatives to aid sleep and/or stimulants to help us stay awake.
- Social and domestic problems.
- Increased likelihood of errors and accidents at work.

Why do some people manage shifts well and others struggle?

This is an interesting question as two workers can have the same shift pattern but research has shown that different people have very different abilities to cope with varying shift patterns. However most people will find shift work harder as they get older and those over 40 are more likely to get disrupted sleep than those in their 20s. This may well be because family responsibilities such as looking after children become more important, so this decreases the ability to catch up with sleep during the day.

We all tend to have a preference for a particular bedtime and wake time that is comfortable. Some of us like to stay up late (night owls) and some of us are really awake early in the mornings (larks). Night owls are more likely to be able to cope with evening or night shift work.

The pattern of shifts plays a part as we will struggle more with a very variable shift pattern or one that rotates between night and day rapidly. This is because our body clock does not have a chance to catch up so sleep is often more disrupted.

One other important reason for shift work becoming harder is if you have any other problem with sleep, such as loud snoring or pauses in the breathing (apnoeas), insomnia or restless legs.

Factors which make coping harder:

- Aged over 40.
- Other sleep disorders such as insomnia.
- Morning larks (those who naturally prefer mornings).
- Night to day shifts that change week to week or rotating shifts.
- Other medical problems such as significant depression.

How to get the most out of your shift

Feeling more alert during work

On some shifts, such as nights and very early mornings, you may find it difficult to remain alert and this can affect your performance. It may also increase the risk of mistakes, injury and accidents. The following has shown to help:

- Exercise before starting work. Anything that increases your heart rate and gets you out of breath for 20-30 minutes will increase your alertness, improve your mood and helps with weight management.
- Keeping the light bright – the lights at work are nowhere near as bright as natural sunlight, so get outside if at all possible in the light.
- Taking regular short breaks during the shift if possible.
- Getting up and walking around during breaks.
- Having a plan to do more stimulating work at the times you feel most drowsy.
- Keeping in contact with co-workers, as this may help both you and them stay alert.

Diet

Think about what and when you eat. Digestive problems, heartburn and reflux are common in shift workers as is weight gain. Reflux occurs when stomach acid comes up into your mouth which can cause discomfort and a burning sensation. This is due to disruption of the internal body clock and poor diet. The following tips will help you keep alert during your shift and aid sleep after.

- Regular light meals or snacks are less likely to make you feel sleepy during your shift. Avoid a single heavy meal.
- Choose foods that are easy to digest such as pasta, rice, bread, salad, fruit, vegetables and milk products.
- Avoid fatty, spicy or heavy meals as these are more difficult to digest. They may also disturb sleep when you need to rest.
- Avoid sugary foods, such as chocolate - they provide a short-term energy boost followed by a dip in energy levels
- Fruit and vegetables are good snacks as their sugar is converted into energy relatively slowly and they also provide vitamins, minerals and fibre.

Stimulants and sedatives

Shift workers often turn to stimulants such as coffee or cigarettes (if they are smokers) to keep them awake and sedatives such as alcohol or sleeping pills to help them sleep. One problem is that people can rapidly become tolerant to these drugs and sometimes dependant on them.

- Caffeine is a mild stimulant present in coffee, tea and cola as well as in tablet form and in special energy drinks. It takes the body at least 4-6 hours to remove most of the caffeine you drink in a strong coffee or diet coke. We all know that it can improve reaction time and feelings of alertness for short periods. However if you use it regularly, this effect wears off so only use caffeine occasionally and don't rely on it to keep you awake. If you do decide to take caffeine or other stimulants, you should consider what might happen when its effects wear off, e.g. when you are operating machinery or driving.
- Avoid alcohol to help you fall asleep. Although alcohol helps you to fall asleep quicker, it also makes you wake earlier and disrupts the night with poorer sleep quality. Regularly drinking too much increases blood pressure, cancer risk, weight and risks damaging your work, social and personal relationships. Regular use of sleeping pills is not recommended, because they can lead to dependency and addiction.

- Prescription stimulant drugs are occasionally used by doctors to increase alertness but they can disrupt the next night's sleep and can only be used in this country after recommendation from a specialist sleep clinic.

What is the best sleep schedule for me?

Most adults need seven to eight hours sleep a day, although this decreases a little with age. Recording sleep patterns and problems using a diary over one to two weeks can really help you to understand your sleep patterns, fatigue and tiredness. It can also be used to help to find the most suitable strategies and conditions for a better quality of sleep. Remember sleep can be flexible and many shift workers are good at napping just before a night shift or catching up during their days off and you need to find a pattern that suits you. The best way to determine if you have had enough sleep is waking up refreshed. So try writing down your time into bed, time up and any naps over your typical shifts. If you are getting less than five hours sleep over days at a time, then you are likely to feel sleepy and fatigued.

Physical fitness and a healthier lifestyle

An unhealthy lifestyle combined with shift work may increase the likelihood of weight gain, sleep disorders and sleep loss or make existing sleep problems worse. A good diet, regular meals and exercise will improve sleep quality, health and well-being:

- You can improve your fitness by spending 30 minutes a day on a physical activity including housework and walking. Consider joining a gym or taking part in a regular exercise class.
- Eat healthy meals on a regular basis.
- Cut down or give up smoking.
- Reduce your alcohol intake.
- Seek advice from your doctor, if you require regular medication such as insulin for diabetes or suffer from a chronic condition such as epilepsy.

Family and friends

Working shifts that differ from the routines of friends and family can leave you feeling isolated. It is important to make the effort not to lose contact with them:

- Talk to friends and family about shift work. If they understand the problems you are facing it will be easier for them to be supportive and considerate.
- Make your family and friends aware of your shift schedule, so they can include you when planning social activities.
- Make the most of your time off and plan meal times, weekends and evenings together.
- Plan your domestic activities around your shift schedule and try to ensure that you do not complete them instead of resting or sleeping. You may need to change the times or days when some jobs are done.
- Invite others who work similar shifts to join you in social activities when others are at work and there are fewer crowds.

How can I get the best sleep after a shift?

Before bed:

Try to follow a similar routine to the one you follow before a normal night's sleep. You would not normally go to bed immediately after coming in from work at 5pm, in the same way many people find they sleep better if they have a "wind down" period before they go to bed. The following tips may help you relax after a shift and promote sleep:

- Go for a short walk, relax with a book, listen to music and/or take a warm bath before going to bed.
- Exercise is good for sleep and general health but avoid it within two hours of bedtime as overheating can stop people sleeping.
- Avoid caffeine, energy drinks and other stimulants within six hours of bedtime.
- Don't go to bed feeling hungry: have a light meal or snack before sleeping but avoid fatty, spicy and/or heavy meals. These are more difficult to digest and can disturb sleep.
- Avoid alcohol, it makes you fall asleep a little quicker but gives you a much more broken night's sleep and it often increases snoring.

In the bedroom:

The best place to sleep is your bedroom, which should be cool, dark and quiet. And it should be your bedroom – not the sofa! Remember as soon as your brain picks up light then it is in daytime awake mode. So the following tips will help you get the best sleep:

- Sleep in your bedroom and avoid using it for other activities such as watching television, eating and working.
- Use blackout blinds or eye shades for complete dark.
- Disconnect the phone, no screens in the room, or use an answer machine and turn the ringer down.
- Ask your family not to disturb you and to keep the noise down when you are sleeping.
- Discuss your work pattern with close neighbours and ask them to try and avoid noisy activities during your sleep time.
- Soft wax earplugs often help to reduce noise.

Is there any other sleep problem that needs to be fixed?

Certain sleep disorders are common and have good treatments so it is important to make sure that your bad night is not due to another problem as well as the shifts. Snoring and pauses in breathing associated with loud snoring (apnoeas) are a common cause of a broken night in those over 40 and in particular in men with increased neck circumference (collar size > 17 inches). If you snore very loudly (can you be heard outside the bedroom door every night?) and your bed partner has witnessed long pauses in your breathing alongside daytime sleepiness, then you should discuss this with your GP in case you need investigation for obstructive sleep apnoea. The diagnosis is made with a sleep study that can be carried out at home or in the hospital. Obstructive sleep apnoea is more common in people with high blood pressure and/or diabetes.

Restless legs can cause an unpleasant need to move at night with legs that kick and jerk and there are a number of good treatments available but certain medications can make restless legs worse.

Driving Safety

Driving to and from work can be risky, particularly after a long shift, a night shift or before an early start. The following strategies may make driving safer:

- Consider using public transport or taxis rather than driving.
- Exercise briefly before your journey.
- Share driving if possible.
- Drive carefully and defensively.
- Stop if you feel sleepy and take a short nap if it is safe to do so.
- Make occasional use of caffeine or energy drinks.

Where can I get further help?

The guidance above has been proven to help many people but takes time and hard work. If you feel you are making little progress or the problem is getting worse then speak to your GP. There are also a number of specialist services that can help you with sleep difficulties following a GP referral

Self help materials

Overcoming Insomnia and Sleep Problems

Colin A. Espie, Robinson London 2006

A self help guide using cognitive behavioural techniques.

<http://www.blf.org.uk/Page/Obstructive-sleep-apnoea-OSA-health-information>

Sleep Council Web site: <http://www.sleepcouncil.org.uk/> Freephone leaflet line 0800 018 7923

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For further information

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The Patient Advice and Liaison Service (PALS) can offer on-the-spot advice and information about the NHS. You can contact them on freephone 0800 032 02 02 or e-mail northoftynepals@nhct.nhs.uk

Useful websites

If you would like further information about health conditions and treatment options, you may wish to have a look at the NHS Choices website at www.nhs.uk. On this website there is an information prescription generator www.nhs.uk/ips which brings together a wealth of approved patient information from the NHS and charity partners which you may find helpful

This leaflet is available in alternative formats on request by telephoning 0191 282 3833 (Monday, Wednesday- Friday 8.30am to 5.00pm)

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