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CAT Block 13

2017 R1 year

[Article: Wickwire et al., Shift Work and Shift Work Sleep Disorder: Clinical and Organizational Perspectives](#)  
Chest. 2017; 151(5):1156-1172.

And now for something totally different!

Purpose: 20% of people in the US engage in shift work, and of those that engage in shift work 20% will suffer from shift work sleep disorder. Guess what, that means for us!

Definition: I think we all know the basics of sleep cycle and why shift work is particularly difficult. It fights the natural sleep cycle regulated by melatonin. But some people have more difficulty than others. Multiple reasons such as genetics, psychosocial stressors, if you are a “morning person” or a “night owl” and personal coping mechanics contribute. The technical definition for circadian rhythm sleep disorder is a combination of recurrent sleep disruption that is due to alteration of circadian system, sleep disturbance resulting in insomnia and/or excessive sleepiness, and sleep disturbance resulting in clinically significant distress or impairment in social, occupational, and/or other waking functioning.

Effects: This impacts us more than just being sleepy. People that suffer from shift work sleep disorder are more likely to suffer increased risk of cardiovascular disease, CVA, GI complaints, obesity, metabolic disorders, cancer, alcohol abuse, and psychiatric conditions.

Recommendation: So what do we do? It all comes back to sleep hygiene. Ensure you have a dark calm sleeping environment where you can block out light and sound. Past that, the recommendations involve trying to alter the melatonin sleep wake cycle. For a typical shift this is their general recommendation.

1. Before the shift starts take a 30-60 minute nap followed by 300 mg of caffeine or stimulant
2. During the first half of the shift ensure exposure to blue light
3. Second half of shift avoid stimulants
4. After shift avoid bright lights, avoid driving while sleepy
5. Consider melatonin prior to sleep
6. Avoid dramatic changes to sleep schedule

Overall some of this is within our control. Avoiding caffeine or alcohol just prior to sleep, avoiding stimulating activities right before sleep, and ensuring adequate sleep hygiene. Other factors can benefit from systemic changes. Avoiding frequent dramatic shift switching (nights to evenings with no true day off in between). The body responds better to clockwise shifting than counter clockwise (days to evenings vs nights to evenings). And trying to schedule like shifts together.

Conclusion: We are all shift workers and as such difficulty sleeping is a likely component for all of us. For our general well-being it's important to learn how to deal with this. Scheduling is an important step, but it's important that we take this in our own hands and learn how to adapt. Avoiding excessive caffeine and alcohol close to bed and ensuring sleep hygiene is important, as is healthy living. Eating healthy and exercise helps facilitate sleep, ensure well-being, and helps minimize stress. Use of exogenous blue light can be used to stimulate wakefulness during night shifts. Melatonin might play a role in helping stimulate sleep during the day. Overall the research into sleep physiology for shift workers is limited but there are basic recommendations and it's another thing we can focus on as we strive for resident well-being.

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