

The Three C's of Fatigue

Here's what we know: all shiftworkers experience fatigue at one time or another. The good news is that understanding the cause of our fatigue can help us develop fatigue mitigation strategies so that we are more rested and fit for duty.

There are several different types of fatigue, but let's focus on the three C's of fatigue:

- Cumulative fatigue,
- Chronic fatigue and
- Circadian fatigue.

Cumulative fatigue may result from working consecutive days or nights with inadequate recovery time in between. While the Control Room Management Requirement states that companies establish shift lengths and schedule rotations that provide controllers off-duty time sufficient to achieve eight hours of continuous sleep, there are many reasons why we may not actually achieve this. Our bedroom might be too noisy, too bright, too distracting or just not well-designed for rest. Our off-duty chores may keep us busy between shifts, because really... who is going to feed the chickens if not us?! It is important to manage our off-duty hours by using our free time between shifts wisely to get as much sleep as possible, living a reasonable distance from the workplace if practical, and scheduling personal activities around dedicated sleep time for off-duty days.

Chronic fatigue may result when we have worked years and years of shiftwork, or if we have a sleep disorder or other health problems which impact our ability to get sufficient quantity and quality of sleep. Most adults should be getting 7 to 9 hours of sleep each night, and the *quality* of our sleep is just as important as the *quantity* of our sleep. There are several sleep disorders which may contribute to our fatigue. Sleep disorders like insomnia, sleep apnea, periodic limb movement disorder, restless legs syndrome and shift work sleep disorder can and should be addressed. In addition to contributing to chronic fatigue, sleep disorders can increase the risk for obesity, diabetes, cardiovascular disease and depression. Seeking treatment for sleep disorders can reduce future health care costs, reduce our propensity for chronic diseases and reduce our fatigue risk.

Circadian rhythm is the body's internal clock. It controls our sleeping patterns, body temperature, digestion, cardiovascular system and hormone production. Circadian rhythm makes shiftwork challenging because our bodies naturally want to sleep at night, when it is darker. **Circadian fatigue** may result when we work during our circadian low periods, particularly between 2 a.m. and 6 a.m. While significant rest during a shift is not typically feasible, there are some activities which may mitigate fatigue during our circadian low periods. Our PPG research with over 1800 Controllers shows the following popular fatigue mitigation measures:

- Talk with coworkers (80%)
- Get a drink with caffeine (74%) or without caffeine (47%)
- Get a snack (61%)
- Go for a walk (56%)
- Browse the internet (49%), watch TV (38%) or listen to the radio (28%)
- Exercise (27%)

Regardless of the type or cause of our fatigue, the only effective countermeasure to fatigue is sleep. However, we cannot ignore our fatigue contributors. There never seem to be enough hours in the day, but plan ahead to get a sufficient quantity and quality of sleep.

