

# The Importance of Sleep

## MCC Medical Patient Education Module

### The Importance of Sleep

Sleep is essential for a person's health and wellbeing, according to the National Sleep Foundation (NSF). Yet millions of people do not get enough sleep and many suffer from lack of sleep. For example, surveys conducted by the NSF (1999-2004) reveal that at least 40 million Americans suffer from over 70 different sleep disorders and 60 percent of adults report having sleep problems a few nights a week or more. Most of those with these problems go undiagnosed and untreated. In addition, more than 40 percent of adults experience daytime sleepiness severe enough to interfere with their daily activities at least a few days each month - with 20 percent reporting problem sleepiness a few days a week or more. Furthermore, 69 percent of children experience one or more sleep problems a few nights or more during a week.

Sleep is a process with several distinct phases. At each phase, different physiological processes take place:

- Deep and restful sleep helps to restore energy you expend during the day.
- Your brain is actively working while you sleep to create new pathways for areas such as learning, memories and new insights.
- Good sleep helps your body to fight off common infections by releasing key hormones while you sleep.
- Sleep gives your heart and vascular system a rest by reducing your heart rate and blood pressure.

### Reasons Why Sleep is Important

1. Poor Sleep Can Make You Fat
2. Good Sleepers Tend to Eat Fewer Calories
3. Good Sleep Can Improve Concentration and Productivity
4. Good Sleep Can Maximize Athletic Performance
5. Poor Sleepers Have a Greater Risk of Heart Disease and Stroke
6. Sleep Affects Glucose Metabolism and Type 2 Diabetes Risk
7. Poor Sleep is Linked to Depression
8. Sleep Improves Your Immune Function
9. Poor Sleep is Linked to Increased Inflammation
10. Sleep Affects Emotions and Social Interactions
11. Sleep Reduces Anxiety

### Substance-Induced Sleep Disturbances

Sleep disturbances have been associated with drug and alcohol use, drug and alcohol abuse, and withdrawal from drugs and alcohol. Additionally, evidence is increasing that insomnia is a risk factor for developing psychiatric disorders, including substance use disorders. Drugs and alcohol can also cause or worsen sleep apnea, and can contribute to restless leg syndrome. Many people who take opiates report difficulty in falling asleep and staying asleep.

Sleep disturbances are between five to 10 times higher in people with substance use disorders, compared with the general population. Drug and alcohol dependence can lead to insomnia and sleep disruption that can last long after a patient achieves abstinence. Additionally, there is increasing evidence that shows that insomnia is a risk factor for developing psychiatric disorders, including substance use disorders. Often, patients with a substance use disorder are caught within a vicious cycle of self-perpetuating sleep disruption. The substances that they take cause a sleep disturbance, which in turn causes them to relapse, which then causes them to take more substances that interfere with their sleep! For some, this can be a never-ending cycle.

Substance-induced sleep disorder is a separate classification established by the American Psychiatric Association for substance-related conditions that mimic or strongly resemble the effects of the true sleeping disorders. Substance-induced sleep disorder is a mental health condition characterized by any one of a variety of sleep disturbances brought on by the use/abuse of alcohol or a number of legal and illegal drugs. Depending on individual circumstances, the condition can produce insomnia (excessive sleeplessness), hypersomnia (excessive sleepiness), any one of several different sleep-related conditions known as parasomnias, or a mix of symptoms that feature aspects of insomnia, hypersomnia and/or parasomnia.

Some people develop substance-induced sleep disorder while intoxicated with a given causative substance, while others develop the condition during withdrawal when the body is trying to recover from the effects of substance use. In fact, some individuals have been known to have sleep disturbances for up to 18 months after they are able to successfully stop abusing drugs and alcohol. Since we know that substance abuse induced sleep disturbances often result in relapse, diagnosing and treating substance induced sleep disorders is an essential part of treating patients with substance use disorder and preventing relapse.

### Drugs and Sleep

*Prescription drugs that may cause sleep problems include:*

Opiates, benzodiazepines, barbiturates, some high blood pressure medications, hormones such as oral contraceptives, steroids, inhaled respiratory medications, diet pills, ADHD medications, and some antidepressants.

*Nonprescription drugs may cause sleep problems:*

Opiates, alcohol, caffeine, pseudoephedrine, cocaine, amphetamines, methamphetamines, and nicotine.

Many prescription and nonprescription drugs can cause sleep problems. The severity of sleep problems caused by a drug will vary from person to person. Different substances tend to produce different, characteristic sleep disorder-related symptoms.

Alcohol often is thought of as a sedative or calming drug. While alcohol may induce sleep, the quality of sleep is often fragmented during the second half of the sleep period. Alcohol increases the number of times you awaken in the later half of the night, when the alcohol's relaxing effect wears off. It prevents you from getting the deep sleep and REM sleep you need, because alcohol keeps you in the lighter stages of sleep. With continued consumption just before bedtime,

alcohol's sleep-inducing effect may decrease as its disruptive effects continue or increase. The sleep disruption resulting from alcohol use may lead to daytime fatigue and sleepiness. The elderly are at particular risk for alcohol-related sleep disorders, because they achieve higher levels of alcohol in the blood and brain than do younger adults after consuming an equivalent dose. Bedtime alcohol consumption among older adults may lead to unsteadiness if walking is attempted during the night, with increased risk of falls and injuries.

People intoxicated with amphetamines often experience some degree of insomnia; conversely, amphetamine withdrawal often produces symptoms of hypersomnia. People who abuse amphetamines or take high amphetamine doses prescribed by their doctors can develop serious distortions of their circadian rhythm, which is the internal "clock" that tells human beings when to sleep and when to wake. Other substances notable for their ability to produce insomnia during intoxication include cocaine and caffeine. In addition, cocaine withdrawal can easily produce varying degrees of hypersomnia.

Nicotine can disrupt sleep and reduce total sleep time. Smokers report more daytime sleepiness and minor accidents than do nonsmokers.

### **Treatment**

The good news is that most substance induced sleep disturbances will resolve over time once the offending substance has been stopped. Substance induced sleep disturbances can be treated with medication, cognitive behavioral therapy, and practicing good *sleep hygiene*.

*What is sleep hygiene?*

Sleep hygiene is a variety of different practices that are necessary to have normal, quality nighttime sleep and full daytime alertness.

*What are some examples of good sleep hygiene practices?*

*The most important sleep hygiene measure is to maintain a regular wake and sleep pattern seven days a week.* It is also important to spend an appropriate amount of time in bed, not too little, or too excessive. This may vary by individual; for example, if someone has a problem with daytime sleepiness, they should spend a minimum of eight hours in bed, if they have difficulty sleeping at night, they should limit themselves to 7 hours in bed in order to keep the sleep pattern consolidated. In addition, good sleep hygiene practices include:

1. *Maintain a regular wake and sleep pattern seven days a week. Get up in the morning and go to bed a night at the SAME time EVERYDAY.*
2. *Avoid napping during the day.* It can disturb the normal pattern of sleep and wakefulness.
3. *Make sure your bedroom is cool, dark, and quiet.*
4. *Block out seven to nine hours for a full night of uninterrupted sleep.*
5. *Avoid stimulants* such as caffeine, nicotine, chocolate, and alcohol too close to bedtime. While alcohol is well known to speed the onset of sleep, it disrupts sleep in the second half as the body begins to metabolize the alcohol, causing arousal.
6. *Regular exercise can promote good sleep.* Vigorous exercise should be taken in the morning or late afternoon. A relaxing exercise, like yoga, can be done before bed to help initiate a restful night's sleep.
7. *Food can be disruptive right before sleep.* Stay away from large meals close to bedtime. Also dietary changes can cause sleep problems, if someone is struggling with a sleep problem, it's not a good time to start experimenting with spicy dishes. And, remember, chocolate has caffeine.
8. *Ensure adequate exposure to natural light.* This is particularly important for older people who may not venture outside as frequently as children and adults. Light exposure helps maintain a healthy sleep-wake cycle.
9. *Establish a regular relaxing bedtime routine.* Try to avoid emotionally upsetting conversations and activities before trying to go to sleep. Don't dwell on, or bring your problems to bed. Keep worry and stress outside the bedroom.
10. *Associate your bed with sleep.* Get into bed only when you are tired. It's not a good idea to use your bed to watch TV, listen to the radio, use your computer, or read.
11. *Avoid looking at the clock.*

### **Considerations**

People who use substances capable of producing sleep disturbances also sometimes have undiagnosed symptoms of a true sleep disorder. During examination of their sleep-disordered patients, doctors have the difficult task of separating the effects of official insomnia, hypersomnia, and/or parasomnia from the effects of a given legal or illegal substance. Factors that bear on this determination include the period of time during which sleeping problems occur, the level of substance use that occurred during this period, the intensity of the symptoms present in the affected individual, and the individual's prior history of both substance problems and sleeping problems. Substance-induced sleep disorder is likely in symptomatic people who used substances recently, have symptoms in line with the effects of the substance in question, and have no prior history of non-substance-related sleeping problems.