

FEATURED EXPERT

Substance Abuse & Sleep Issues

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What do we know from your studies and others about normal sleep? Is there such a thing?

Normal sleep is defined as the amount and quality of sleep required to be fully alert and functional the next day, with normal levels of alertness, concentration, attention, and stability of mood. Normal sleep can also be defined as the absence of primary sleep disorders such as sleep apnea, restless leg syndrome, parasomnias (i.e. sleep walking, etc).

The exact amount and timing of sleep can vary from individual to individual and still be called 'normal', as long as the above requirements are met. For example, some people can be fully functional on 6 hours per night (this is unusual), while others need 9 hours of sleep per night.

Variability in the timing is also allowed, as long as the timing does not interfere with vocational, scholastic, or domestic duties. For example, some people are strongly inclined to be 'night owls' (for example, touring bedtime hours between 3 AM and 11 AM). These hours may be dysfunctional for a branch manager of a bank, but may be suitable for a second shift hospital nurse.

How do you know if you have a sleep problem? Can you answer some rating scale? Do you need to get a sleep study aka sleep EEG. Can you do it from home?

Some obvious signs of sleep disorder are: (1) failure at work, in school or at home because of sleep problems, (2) problems falling asleep while driving or during other periods of high risk that require full vigilance, (3) injury occurring to self, others, or property during sleep, but outside of the 'sleeper's' conscious awareness. If you are still not sure whether or not you have a sleep disorder, then there are indeed some simple testing rating scales which you can self-administer that will give an indication of whether a sleep disorder is likely present.

In particular I like rating scales that are simple, short, and free! My favorites are:

- Epworth Sleepiness Scale (a score > 10 indicates abnormal degrees of sleepiness)
- Insomnia Severity Index (a score > 14 suggests at least a moderate degree of insomnia)
- Disturbing Dreams and Nightmares Severity Index (a score > 10 indicates a significant degree of problems with nightmares)

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Sleep studies are helpful, but for the most part they should only be ordered when there is a high index of suspicion for patients with suspected obstructive sleep apnea, central sleep apnea, periodic limb movement disorder, or parasomnia. Sleep studies done in the home (portable sleep studies) are cheaper, and are particularly useful when the index of suspicion is high for obstructive sleep apnea.

Alcoholics often complain about their sleep and sleep quality. What can science tell us about their sleep, awakenings, and over all sleep quality?

Persons who are living with longstanding insomnia, who also have never before had a problem with psychiatric problems or addictions, are at increased risk of developing both mental health problems and addictions if their sleep problem is not solved. Sleep disorders, in effect, become a pathway to addictions, and a potential target for prevention!

Specifically regarding alcoholism – drinking alcohol will usually speed the onset to sleep (called ‘sleep latency’), but a few hours later, as the alcohol is metabolized, sleep will become progressively disturbed. This is related, in part, to the suppression of rapid eye movement sleep (REM) in the first portion of the night while blood alcohol levels are high, then a rebounding return of REM sleep in the second half of the night as blood alcohol levels approach zero. REM sleep is a highly activated state, characterized by dreaming, high brain metabolism, and faster ‘wake-like’ brain rhythms. This highly activated state, when accentuated by middle of the night alcohol withdrawal, will lead to middle of the night awakenings, early morning awakening, and the perception of restless sleep.

This negative impact on sleep can paradoxically lead to more alcohol consumption to offset the induced sleep problem. During periods of abstinence, about 50% of alcoholics will have insomnia problems that extend months into their recovery. Unfortunately, persistent insomnia is a confirmed risk factor for returning to drinking alcohol, suggesting that managing insomnia during abstinence should be a target to prevent alcoholic relapse.

Cocaine and amphetamine abusers and addicts don't seem to sleep much until they crash. Is this a problem?

Cocaine and amphetamine abuse presents a paradigm that is in some way opposite of alcohol and sedative abuse. The sleep that is lost during a stimulant binge must be made-up (at least in part, if not in full) and stimulant abusers will ‘crash’ for long periods after a bout of abuse. The time that is lost during the ‘crash’ may lead to a desire to start another round of stimulant abuse, not only for the euphoria, but in an attempt to ‘make up for lost time.’

Opioid users and addicts seem to nod off and sleep all the time... is that true... what is their sleep like?

Apart from the direct intoxication of an opiate, leading to somnolence, the additional (and perhaps more dangerous problem) is the suppression of normal respiratory rhythms during sleep. While obstructive sleep apnea is due to anatomical blockages in the upper airway during sleep, central sleep apnea is due to reductions in central respiratory drive during sleep. This manifests as reduced frequency and depth of breaths during sleep, and irregular rhythmicity of breathing. Opiate intoxication can precipitate central sleep apnea, with corresponding reduction in blood oxygen and increases in blood carbon dioxide, at typically moderate doses of oxycodone and similar narcotics. Alarming, concurrent prescription a benzodiazepine can reduce in-half the dose of narcotic required to precipitate central sleep apnea.

The central sleep apnea seen with opioid prescriptions should be viewed as a stepping stone toward the high rate of respiratory failure deaths seen with opiate overdoses.

Some of the most commonly prescribed medications for insomnia include zolpidem, trazodone, and quetiapine. Is it ok to use these in addicts who suffer with insomnia?

The prescription of zolpidem to addicts should be an uncommon occurrence. People who do not suffer from addiction generally take zolpidem as prescribed, and the overall rate of abuse of zolpidem is low, probably less than 1% of all prescriptions. However, zolpidem produces a feeling of intoxication that sedative abuser recognizes as pleasurable and is self-reinforcing. It should be avoided if at all possible in addicts.

Trazodone is second most-prescribed sleep aid, following after zolpidem. It is FDA-indicated for the treatment for depression (not insomnia) and is not a controlled substance. It is less likely to be abused than zolpidem, but it is only modestly effective as a hypnotic. Trazodone is generally believed to be safer than zolpidem, but it still is encumbered by memory side effects and the potential for daytime hangover sedation, even at low doses at bedtime. Quetiapine is indicated for the treatment of schizophrenia and bipolar disorder, and is not indicated for the treatment of insomnia. It is now a controlled substance. It has modestly beneficial effects for sleep, and is unlikely to be abused, but it is associated with side effects such as weight gain, insulin resistance, and restless leg syndrome. A plan to use of these medications should come after prior consideration of non-pharmacologic approaches, described below in the next Q/A.

[Withdrawal is often accompanied by insomnia or poor sleep, it doesn't seem to get better for months if not a year. Is this true? It is very annoying and can relapse, can't it? Is it different than the sleep disorder or insomnia seen in depression? What can you do about this?](#)

Withdrawal from alcohol, sedatives, and marijuana can each be associated with prolonged periods of insomnia months after the other signs of physiologic withdrawal has dissipated. The relentless insomnia is thought to be a precipitant for relapse in many cases. Interestingly, the sleep EEG during acute withdrawal for alcohol and marijuana may show abnormal increases in REM sleep – similar to the accentuated REM sleep seen in depression. There is limited research addressing the possibility of whether treating sleep disturbance during withdrawal will reduce the risk of relapse, but it is an enticing possibility.

[Should all or which former addicts should be evaluated for a sleep disorder? Should they get sleep EEGs and other work up?](#)

All addicts whether they be active users or in recovery, should be screened for sleep disorders. The first wave of screening starts with a focused sleep interview, and a focused physical exam to look for anatomical abnormalities associated with obstructive sleep apnea. Sleep rating scales, such as those described above, are immensely useful in deciding what sleep problems rise to the level of a sleep disorder. Overnight sleep EEG tests should be reserved for patients with suspected obstructive sleep apnea, central sleep apnea, periodic limb movement disorder, or parasomnia.

[Are there any diets, supplements, or sleep medications that you'd recommend. Are there any which are not BZs or without abuse liability?](#)

The most useful behavioral and dietary changes that can be made to improve sleep are the following:

- Consideration for severely limiting or abstaining from all caffeine
- Consideration for severely limiting or abstaining from all tobacco
- Consideration for severely limiting or abstaining from all alcohol, even if alcoholism is not a problem
- Rising at the same time every day
- No naps if you have insomnia
- Never stay in bed more than 8 hours if you have insomnia
- Make sure that the lights in your home are very dim for the last 2 hours before bedtime (severely limit "screen time" with smart phones, iPads, etc)
- Never monitor your 'progress' during the night by watching the clock

If sleep medications are required, and there is a desire to avoid medications with addictive potential and which are controlled substances, then consider the following:

- Valerian root (if you can find a reliable source)
- Melatonin 3-6 mg
- Ramelteon 4 or 8 mg (this medication is limited to helping with falling asleep, not staying asleep)

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- Doxepin 3, 6, or 10 mg (this medication is limited to helping you stay asleep at these doses)
- Gabapentin 300-1800 mg at bedtime (this medication is not indicated for sleep, but small clinical trials have shown beneficial sleep effects during early abstinence from alcohol, and some evidence for reduced cravings and prolonged time to relapse)

Of the opioid overdose patients evaluated and treated with Narcan how many have previously overdosed, how many had thought they might overdose, how many had thought they would go to sleep and maybe not wake up... the question is dual disorder and passive suicidal thinking and active suicide as part of the "accidental" overdoses we see... any comments as a depression expert and chair.

While many opioid overdose deaths seem to be purely accidental and a matter of 'miscalculation', there are other overdoses which are explained either by an active desire to die by overdose, or a willingness to 'roll the dice' and accept whatever outcome comes, including death by suicide. While addicts have many reasons to feel 'lost' and helpless in their addiction, and perhaps see suicide as a solution, in my opinion, this helpless/hopeless attitude is likely compounded by the superimposed insomnias, hypersomnias, and other sleep disorders. Abundant evidence has shown that sleep disorders are associated with deficits in executive cognitive function (i.e., decision making). The person who has lived with insomnia for a long time may be expected to have deficient ability to solve 'life's problems', and thus default to suicide as the only solution.

It is exciting to consider that identification and treatment of sleep disorders might not only reduce the rates of relapse in addictions, but also reduce the risk of suicide.

Would you like to be interviewed by Dr. Mark Gold or submit questions for an expert to answer?

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