

## FAQ: DRUGS/MEDICATIONS AND OBSTRUCTIVE SLEEP APNEA (OSA)

### KEY FACTS

- According to a 2005 Sleep in America conducted by The National Sleep Foundation found that 33% of those who drink 4 or more caffeinated beverages daily are designated at risk for sleep apnea.
- If you have OSA, avoid alcohol, sleeping pills, tranquilizers, and other sedatives.
- If you have OSA, talk to your physician before taking any medications.

#### Q: Does nicotine affect obstructive sleep apnea?

**A:** Yes, nicotine in tobacco relaxes the muscles that keep the airway open and worsens swelling in the upper airway, making apnea (and snoring) worse. Smokers are at a higher risk of suffering from OSA when compared to non-smokers. In fact, studies have shown that smokers have a three times higher chance of suffering from OSA than non-smokers. Smoking is known to increase inflammation and fluid retention in the upper airway which can further aggravate OSA. Nicotine also is a stimulant, which if used close to bedtime may make it difficult to go to sleep and cause increased sleep disruptions.

#### Q: What medications can worsen OSA?

**A:** Certain medications such as benzodiazepines, non-benzodiazepines, over the counter medications, opiates, and barbiturates can affect sleep apnea and impact breathing by sedating and suppressing your level of consciousness. Each of these medications can suppress breathing and make the upper airway more collapsible. This may worsen sleep disordered breathing such as sleep apnea.

#### Below is a list of some medications that can worsen OSA:

**Benzodiazepines:** include many medications used to relieve anxiety. Some are used as muscle relaxants or as anticonvulsants to treat seizures.

Alprazolam (Xanax, Niravam)  
Chlordiazepoxide (no brand name)  
Clonazepam (Klonopin)  
Clorazepate (Tranxene)  
Diazepam (Valium, Diastat)  
Lorazepam (Ativan)  
Quazepam (Doral)  
Midazolam (no brand name)  
Estazolam (Prosom)  
Flurazepam (Dalmane)  
Temazepam (Restoril)  
Triazolam (Halcion)

**Non-benzodiazepines:** are a class of prescription medicines that are similar to benzodiazepines with less severe and less frequent side effects; however, they can be addictive if they are taken every night for a prolonged period of time.

Eszopiclon (Lunesta)  
Zolpidem (Ambien)  
Zaleplon (Sonata)

Opiates: these medications are used primarily for pain relief, cough, and diarrhea. Opioids result in increased respiratory pauses, impair the arousal response, cause irregular breathing, shallow breaths, and sleep apnea.

Hydrocodone  
Oxycodone



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Fentanyl  
 Meperidine  
 Methadone  
 Morphine  
 Sufentanil  
 Codeine  
 Propoxyphene  
 Buprenorphine  
 Pentazocine

**Barbituates:** formerly used for sedation, epilepsy, and sleep aids. Barbituates have a risk for dependency, withdrawal, and coma in toxic doses.

Amobarbital  
 Phenobarbital  
 Pentobarbital  
 Secobarbital  
 Thiopental

OTC (Over-the-counter) medications:

Diphenhydramin (Benadryl)  
 Pseudoephedrine, including the brand Sudafed  
 Unisom, Sominex, Sleepinal, Nytol, Tylenol PM, Nyquil

Illegal drugs:

Cocaine  
 Amphetamines  
 methamphetamines

### Q: How can anesthesia impact a person with sleep apnea?

**A:** Providing sedation to any patient usually causes some relaxation of the upper airway and throat and can cause obstruction. The presence of sleep apnea presents special challenges to the administration of anesthesia and pain medications because of this. According to Sleep Diagnosis and Therapy, patients with sleep apnea are four times as likely to have serious complications post-surgery. There are two different ways to sedate patients. The most common is general anesthesia, which means the patient is unconscious, so that they don't react to or feel anything. The other method of sedation is local sedation or conscious sedation which does not make a patient completely unconscious. These include narcotics, barbituates, sedatives like valium, and nitrous oxide. All of these can cause relaxation of the muscle tone and worsen sleep apnea. Normal sleep is very different from the "sleep" induced anesthesia, which is more like a coma. Working with the anesthesiologist ahead of time and making them aware of pre-existing problems such as OSA is extremely important.

### Q: Are there medications used for the treatment of obstructive sleep apnea?

**A:** No. However, there are some common medications used to treat or reduce the symptoms of obstructive sleep apnea. The two FDA approved wakefulness-promoting medications are: Nuvigil (armodofinil) and Provigil (modafinil). These drugs are sometimes prescribed to patients with obstructive sleep apnea continue to have residual excessive daytime sleepiness despite appropriate treatment/therapy obstructive sleep apnea. Nuvil and Provigil work by improving alertness and memory. Serotonin reuptake inhibitors (SSRIs) such as Prozac, Paxil, and Fluoxetine have been shown to help combat the symptoms of OSA. Depending on the severity of sleep apnea, some sleep physicians may prescribe antihistamines, such as loratadine (Alaver, Claritin), fexofenadine (Allegra), and cetirizine (Zyrtec) to help decrease nasal congestion, because they are less likely to cause sedation unlike Benadryl, which has more of a sedative effect. Nevertheless, these agents are not likely to reduce the severity of obstructive sleep apnea. Even though these medications can be found over the counter, patients with OSA should not take any of them without first consulting with their sleep physician. A variety of OTC nasal sprays and nasal strips may prove beneficial to some patients with OSA in helping to reduce snoring. Nasal decongestants are more likely to be effective in cases of snoring or very mild sleep apnea. SSRIs have been noted to improve upper airway muscle tone during sleep and lessen severe OSA. Fluoxetine (Prozac) and paroxetine (Paxil) have been reported to lessen OSA severity. However, with all medications there are side effects such as increased restless legs symptoms and periodic limb movements during sleep in susceptible patients. Since the beneficial effects for OSA are rather mild, these agents are not the first line treatment for OSA.

**Q: Can drinking a small amount of alcohol to help me relax before bedtime be harmful if I have OSA?**

**A:** Yes! Alcohol relaxes the upper airway muscles (throat) and decreases your drive to breathe, making it more likely for your upper airway to collapse when sleeping. Alcohol acts like a sedative for the first couple hours of sleep and reduces a person's arousal threshold. Alcohol increases the duration and frequency of OSA and in some cases, can be extremely dangerous to the apnea patient. It is very important to discuss the use of alcohol with your sleep physician. As a depressant that slows brain activity, alcohol may initially make you tired, but you will end up having fragmented, disrupted sleep during the second half of the sleep period. In addition, being tired intensifies the effects of alcohol. Alcohol should never be taken or combined with any other drugs that suppress your consciousness or respiratory system. Therefore, if you have sleep apnea, the best advice would be to abstain from all alcohol use, or at least alcohol should not be consumed several hours (4–6 hours) prior to bedtime to minimize the effects while sleeping.

**Q: Are homeopathic/herbal medications harmful for patients with OSA?**

**A:** The National Center for Complementary and Alternative Medicine, a division of the National Institutes of Health, provides a warning against the use of herbs to treat sleep disorders, including OSA. Before you indulge in any form of self-medication, it is highly recommended that you consult the opinion of your physician. Possible negative interactions between herbs and medications often result when patients fail to disclose their use of alternative treatments to doctors. Melatonin is a natural hormone made by your body's pineal gland located in the brain. During the day the pineal is inactive but in darkness or night the pineal is "turned on" and as a result sleep becomes more prominent. Melatonin can be found in most pharmacy stores or health food stores and is not controlled by the FDA. Melatonin is used to help improve sleep and used by some shift workers, for jet lag, and delayed sleep phase syndrome. There is not enough research on the long term use or its effectiveness, and there is not any concrete evidence to support that it is unsafe for sleep apnea patients. Patients with sleep apnea should discuss with their physician before taking.

## FURTHER READING

1. **ASA (American Sleep Association):** [www.sleepassociation.org](http://www.sleepassociation.org)
2. **WebMD:** [www.webmd.com](http://www.webmd.com)
3. **National Sleep Foundation (NSF):** [www.sleepfoundation.org](http://www.sleepfoundation.org)
4. **American Sleep Apnea Association:** [www.apneasupport.org](http://www.apneasupport.org)