

Table 1—Medications that may interfere with sleep architecture.⁴⁴

Drug Class	Example Agents
Adenosine modulators	theophylline, theobromine, caffeine
Alpha-2 delta ligands	gabapentin
Antidepressants	
SSRIs ⁴⁵	fluoxetine*, escitalopram, sertraline, paroxetine
SNRIs	venlafaxine, duloxetine
Bupropion	bupropion
Tricyclic antidepressants	nortriptyline, amitriptyline, doxepin
Antihistamine, sedating	diphenhydramine, doxylamine
Antipsychotic agents	quetiapine
Alpha antagonists	prazosin
Benzodiazepines/NBRAs	flurazepam*, clonazepam, lorazepam, zolpidem, eszopiclone, zaleplon
Dopamine agonists	pramipexole, rotigotine, ropinirole ⁴⁶
Lithium	lithium
Melatonin agonists	ramelteon, tasimelteon
Opioid agonists	morphine, hydrocodone, methadone, ⁴⁷ fentanyl ⁴⁸
Oxybates	sodium oxybate; calcium, magnesium, potassium, sodium oxybate ⁴⁹
Steroids	prednisone ⁵⁰
Stimulants	methylphenidates, amphetamines
Wake-promoting agents	armodafinil, modafinil, pitolisant, solriamfetol

*Medication agents with long half-lives and longer washout (up to 6 weeks) may be needed. This list is not exhaustive and health care providers should consider impacts on sleep architecture with newer/future medications. CBG = cannabigerol, MAOIs = monoamine oxidase inhibitors, NBRAs = nonbenzodiazepine receptor agonists, SNRIs = serotonin noradrenergic reuptake inhibitors, SSRIs = selective serotonin reuptake inhibitors.

architecture in general and REM sleep in particular. A sufficient period of time for observation after discontinuation should be established and will depend on the pharmacokinetics of each medication. A 2-week washout period is generally considered adequate for most REM-suppressing medications, although medications with longer half-lives may require a longer period. A recent study showed that 13.2% of patients weaned off REM-suppressing medications ≥ 2 weeks prior to MSLT vs 5.9% of patients with no history of such medication use had a positive MSLT.⁴³ Such results may suggest that weaning off REM-suppressing antidepressant even weeks before testing can still result in REM rebound and longer tapers may be needed.

Prior to discontinuation, the health care provider should consider an appropriate taper to also minimize withdrawal effects and ensure the patient’s safety. This may require developing a taper plan with the patient’s care team prior to testing, and a medication reinitiation plan following testing.

A 2-week washout is generally recommended; agents with an asterisk in **Table 1** have long half-lives and longer washout (up to 6 weeks) may be needed. **Table 1** includes commonly encountered medications or those requiring a prolonged wash-out period, but it is not an exhaustive list.

Caffeine, drugs, and drug screening: Health care providers should screen for recreational and illicit drugs prior to MSLT, because they can affect sleep architecture and either produce or

inhibit daytime sleepiness. Methods of drug screening vary from urine tests utilizing immunoassay technology to urine or blood testing using more advanced gas chromatography–mass spectroscopy techniques that can also test for prescription and over-the-counter products.

In children, the yield of standard drug testing may be low. A 2014 study of 214 MSLTs performed in children revealed 0 positive screens for drugs of abuse, although further testing using gas chromatography/mass spectrometry showed a 31% test positivity rate for caffeine, 5% positivity rate for selective serotonin reuptake inhibitors, and 4% positivity rate for over-the-counter medications.⁵¹ Positive urine toxicology screens may be more likely in older adolescents. In a 2015 study of 383 patients under age 21 years undergoing MSLT, no patients under 13 years of age had a positive toxicology screen, but 20% of patients above age 13 years screened positive for THC.⁵² Among the 14 patients with a positive urine drug screen for THC, 71% had multiple SOREMPs on MSLT. Data collection for these studies occurred prior to legalization of marijuana in many states and follow-up studies are needed.

Caffeine is known to affect nighttime sleep quality, resulting in shorter sleep duration, increased sleep-onset latency, increased wake time after sleep onset, and decreased slow-wave activity; increased daytime sleepiness is associated with higher caffeine intake in children as young as 12 years of age.^{53–57}

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